Family Roots™ Version 3
Commodore Systems

Family Roots™

Instruction and Reference Manual

by

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»»» Tree Charts™ «««

An additional program called TREE CHARTS is also available for MS-DOS or IBM, C-64, APPLE DOS 3.3, and APPLE ProDOS on the IIe, IIc, and IIgs. This program uses the data from FAMILY ROOTS to create a box chart of your family tree. TREE CHARTS prints the information for each person in a box and draws a line to that person's spouse. Another line drops down to connect boxes for each of their children which are in turn connected to their spouses and children. The sample enclosed includes a shrinked page to demonstrate the layout. The trees are printed in strips that can be connected to display your whole family tree, including ancestors, grandchildren, aunts, spouses and cousins.

TREE CHARTS grows trees automatically for anyone you select from your FAMILY ROOTS data. You can display your whole family or limit the tree to ancestors or descendants only. You can also grow a tree that shows the closest relationship between any two people in your data base.

You can show an overall view of the tree on the screen, or display a close-up of a selected part and edit the tree. You can add people, move boxes around to make room for more people, or prune the tree to include only one branch of the family.

Trees can be saved to disk and easily updated when you make additions to your FAMILY ROOTS data. You have the option to reprint only a part of the tree when something has been changed.

Trees can be printed in three formats, an 'X' for each person to display the overall pattern, the record number in a box for each person, or you can print a tree containing some or all the data in each person's FAMILY ROOTS record. You select the size of the boxes and which fields to include. The trees can be printed using any graphics characters or fonts your printer will support. Trees can also be printed to disk to be edited further with your word processor or printed sideways on the page if you have software such as the SIDEWAYS program.

TREE CHARTS is an nice addition to the capabilities of FAMILY ROOTS. The menus are similar in style so you will find it familiar and easy to use.

TREE CHARTS includes a detailed manual and is available for $60 from QUINSEPT. Your order would be appreciated.

Sincerely,

Steve Vorenberg

Steve Vorenberg

MAREEN DUVALL
Born: circa 1630 NANTES FRANCE
Died: circa 1694 MD
Married: circa 73/4>

SUSANNA BRASSEUR
Born: VA
Died:
Married: <circa 73/4

ROBERT TYLER II
Born: 01 Jun 1671 MD
Died: circa 1738 'BROUGH' QUEEN ANNE
Married: circa 1695>

BENJAMIN DUVALL
Born: circa 1692 ANNE ARUNDEL CO MD
Died: circa 1774 ARUNDEL CO MD
Married: circa 1713>

SOPHIA GRIFFITH
Born: 04271691
Died: 04191730 ANNE ARUNDEL CO MD
Married: <circa 1713

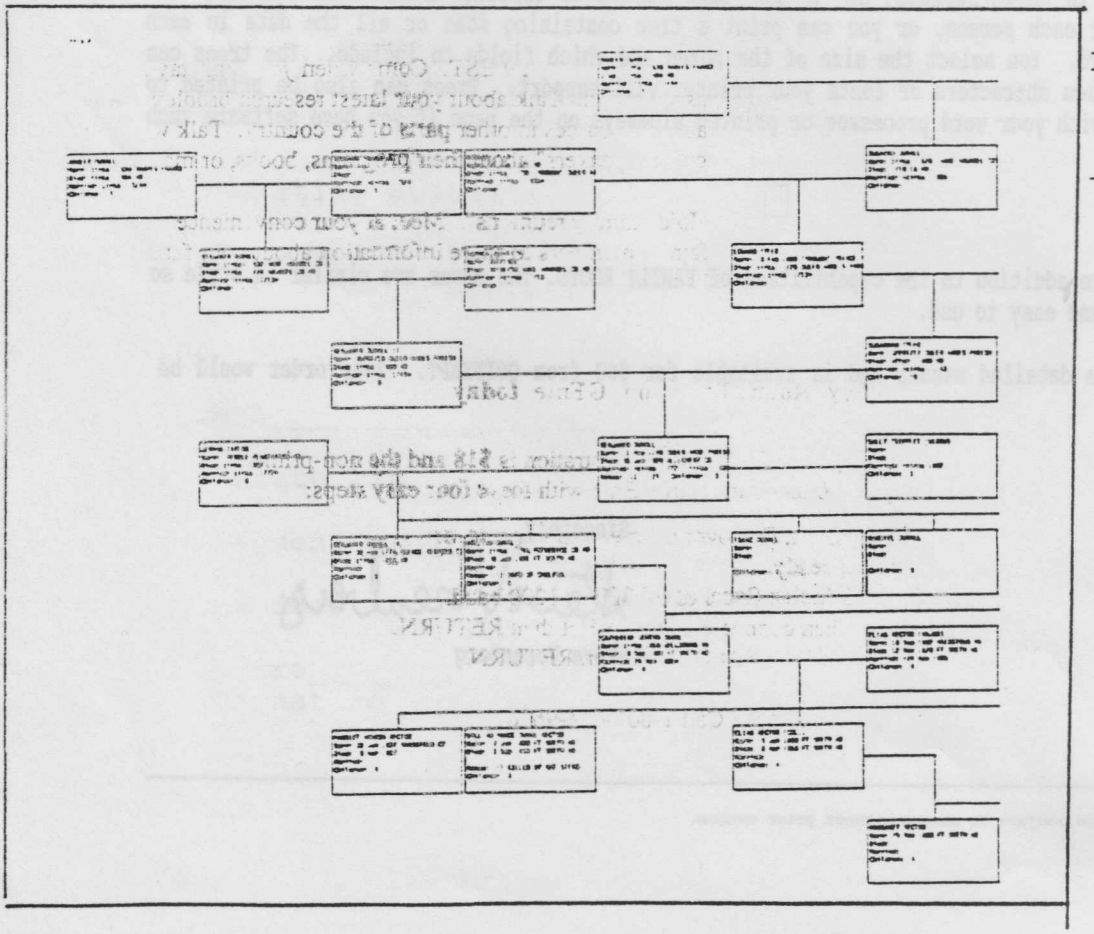
BENJAMIN DUVALL II
Born: 05291719 QUEEN ANNES PARISH PR
Died: circa 1800 MD
Married: circa 1743>

JEMIMA TAYLOR
Born: MIDDLE PLANTATION MD
Died: circa 1807
Married: circa 1772>

BENJAMIN DUVALL IV
Born: 08 Feb 1774 PRINCE GEORGES CO
Died: circa 1813 WV
Married:

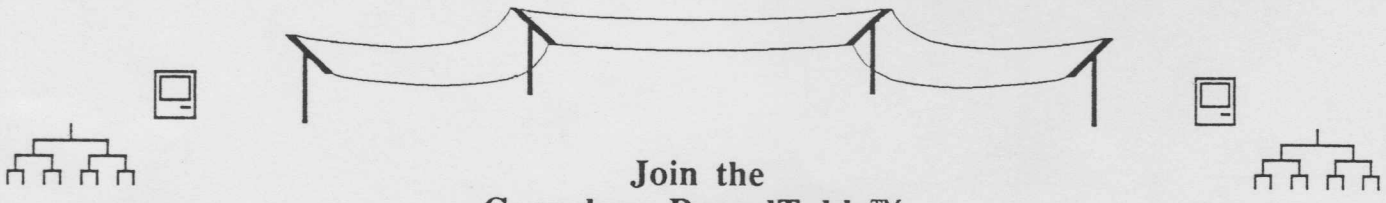
WILLIAM DUVAL
Born: circa 1784 FREDERICK CO MD
Died: 30 Jun 1831 FT SMITH AR
Married:
Notes: 1) DIED OF CHOLERA

This is a shrunken example
of the entire tree.



WILLIAM VANCE DUVAL RECTOR
Born: 10 Jun 1839 FT SMITH AR
Died: 13 Sep 1845 FT SMITH AR

Notes: 1) KILLED BY BEE STING



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FAMILY ROOTS

Instruction and Reference Manual

1. INTRODUCTION

FAMILY ROOTS is a set of programs that assist you in your search for family historical information. The use of the programs allows you to store a standard set of information for each family member and rapidly access that information for viewing or printing in a variety of useful ways. Based on our own experience using these programs for our own genealogy research, we have found the use of a computer (as opposed to notebooks, etc.) to be especially advantageous for two reasons:

1) the most current information is always easily available, and

2) the ability to print the most current information makes it very easy and convenient to send requests for clarification, additions and corrections to relatives and other sources.

We trust you will find this product very useful. In addition we welcome your suggestions for improvements to the design, and for added features.

This user's manual first describes the general capabilities of each part of the program. After that there is a general section that defines terms and describes how to get started. Following that are separate sections giving the minute details. We suggest that the entire manual be read before you begin, but barring that, the sections on "Getting Started" and "Data Entry" can get you started.

There are eight programs that perform the main capabilities supplied by FAMILY ROOTS. Storage of birth, death, marriage, parents, offspring and notes for each person is supported by one program. Two others print automatically-generated genealogy charts for both predecessors and descendants. A fourth program provides formatted outputs of your information for individuals, and a fifth prints several types of family group forms. A sixth program allows you to make indices of your people in a wide variety of ways. The seventh allows you to search through your data for a large variety of information. Finally, there is a program that allows you to store unstructured textual data (notes, etc.) that can be retrieved by name. In addition to the major capabilities, there are many utility programs to satisfy special needs. More detailed descriptions may be found in the following sections.

As mentioned above, these programs have been extensively tested by use in our own genealogy research. We believe we have a high quality

product, relatively free of errors. Nonetheless, as software professionals, we know that all of the problems in a complex program are never found. We appreciate being notified of problems you find and will either tell you how to fix them or trade you a replacement diskette, whichever is appropriate to the magnitude of the error. We are also anxious to keep our product competitive and useful to you and welcome your suggestions for new features and new programs to include in the package.

A word needs to be said about that nasty subject, COPYING. We are not copy protecting our product for three reasons. The first is a practical one. Copy protecting doesn't really work since there are programs available that will copy nearly anything; it frustrates you; and it adds additional cost which would have to be reflected in our price. The second reason is that you will be better able to adapt the programs to your own uses and your own hardware configuration by having access to the files. The third reason is that we can easily send you small corrections via letter when needed. (We always provide the option of allowing you to mail us a diskette and have us make the changes for you, if you prefer.) Nonetheless, the programs are copyrighted and we plead with you to restrict your copies to those you need for your own use and safety. Our ability to remain in business, providing you support and quality future capabilities, as well as other software products, depends on your integrity in this matter. We are trusting your honor and hope not to regret it. Thanks!

2. OVERVIEW OF PROGRAMS

This section gives you an overview of the capabilities of each of the programs within Family Roots in order to orient you. The most detailed descriptions are in the individual sections devoted to each program.

EDIT is the data entry program. It allows you to set up a storage area for each person that you want to keep data on and later modify it. Each person's name can have up to four components and each name becomes associated with a number that shows where the person's information is stored; this is the "record number.". Records can be accessed for additions and changes either by name or by number. Each record can be used to store date of birth, place of birth, date of death (if applicable), place of living or death, father, mother, children, notes/footnotes and number of marriages. For each marriage, the spouse, date of marriage, place of marriage and marital status can be entered. You may also define up to nine fields of your choice. EDIT has several features to aid your data entry. You may either step through portions of the list of possible items or selectively change as many items as you wish. When you are finished with your entries for one person, the program fills in obvious complementary information in other records, e.g. if you enter marriage data for a person, EDIT also puts that data into the spouse's record to save you the trouble of entering it twice. Specially defined keys allow you to enter commonly used names and places with an abbreviated sequence. Finally there are a number of program parameters you can directly control in order to accomplish data entry the way you want to do it.

FREEFORMS prints two primary types of charts for you, one for descendants and another for ancestors. These free-form charts are well suited to computer generation, although the format may not be familiar to you. Some important variations allow you to select the style of lines, the amount of information to include for each person, and its order. As in EDIT, there are a large number of program parameters to control the ways in which your data is printed.

STRUCTURES prints two additional types of ancestor charts in the more traditional formats. You may print a 4 or 5 generation standard pedigree chart, with several variations possible. There is also a special pedigree form (traditionally called an Ahnentafel) that compresses many generations onto one page with detailed information included for each person. STRUCTURES provides access to various program parameters for controlling the printing.

PERSONS prints or displays your data organized by individual, and can be used to show all the information stored for a person. A method is provided for following a family line on the screen and for printing selected sheets after viewing them. The printed individual sheet is

often used for binding into family books. Parameters are provided for control of formatting and selection of information to include.

GROUPS prints two types of groups sheets; that's the form that traditionally shows a husband, wife, and children of that union, along with selected facts for each. One of the forms uses the Mormon (LDS) format. The other form is less structured and allows you to specify which information to include. Parameters are supplied which allow you to affect formatting and other areas.

LISTS constructs indices of your names in a wide variety of ways. Any list may be printed or displayed in either alphabetic or numerical order. You may select people to include in your list by diskette, by number range, by supplying your own list of numbers, by common name elements (such as everybody with the same first name), by first letter in the surname, or by surname SOUNDEX (names that sound alike). Merging of lists from different sources (for example, multiple diskettes) is supported. Parameters allow for formatting and for things such as whether the women are listed using their maiden or married names, or both.

SEARCH allows you to search through records for information of your choice. You can search for embedded character sequences, e.g. you might want to find all people having a mention of Omaha or everyone who was a teacher. You can search dates in various ways, e.g. you can look for all people with the same birthday or everyone living in a certain year. You can search for all mentions of a person. You can search for blank fields. Finally you can search for all people who have a certain number of children or a certain number of marriages. Each of the searches noted above is controlled by you as to what you want to search for and which records you want searched. The parameters used to set up a search are so general that you can search for virtually anything you have stored. Lists of the people satisfying the search can be passed to the other programs.

WORDS is included within Family Roots in case you don't have a word processor yet, or you need a limited capability. WORDS allows you to write a page or two of unstructured information, typically historical notes. The text files generated by WORDS are compatible in format with those used by some commercial word processors, and can be edited either with those or with WORDS. WORDS provides a variety of parameters for control of printing and other items.

Numerous utility programs are also provided. MANAGER is used to show the other programs what hardware you are using; it also controls various aspects of the operation of the other programs and sets the starting values for the parameters mentioned above. CREATE is used to prepare empty data diskettes. RENUMBER allows you to reassign the numerical

ID's for selected people. ADDRESS will make an address list for living relatives whose addresses you have included in your data. WHAT will tell you the identity and contents of a Family Roots diskette. EMPTIES allows you to put a previously generated list of names that had been saved on diskette back into the computer's memory. And READER allows you to put a previously generated list of names that had been saved on diskette back into the computer's memory.

Almost but not quite snow white!

3. GETTING STARTED

You are undoubtedly anxious to get started using FAMILY ROOTS and especially to see your own information displayed and printed. Please don't do a lot of work without reading this section first; you may waste a lot of effort otherwise.

The first thing you have to do to make your Family Roots system work properly, is to remove all cartridges that are in the expansion slot at the back of your Commodore 64. Family Roots may lock up your computer if there are any cartridges such as 'fast loaders,' 'turbo loaders' or BASIC extensions plugged into the expansion port. Family Roots works correctly in connection with the 'Magnum Load' ROM chip. This new chip replaces the old ROM chip and will speed up all disk access by a factor of 6. It also works correctly with the EPYX Fastload cartridge, with the exception of the WORDS program.

This section covers some very basic information on how to handle diskettes for those that may be new to their computer. You may zip over this if you're an old hand already. Next we cover how to set up the CONFIGURATION file with your equipment, the data sizes and formatting. This is VERY IMPORTANT as it will set up some limits that you may have to live with for awhile, and the programs may not work at all until you have told them what equipment you are using. Later, we describe how to set up your data diskettes prior to saving your information on them. And finally, we set up some of the ground rules we have used for the design of FAMILY ROOTS and how we will describe using the programs.

3.1 Backups, Booting, and other Basics

Before you do anything else, you should make backups of your program diskettes, i.e. the diskettes we supplied when you bought FAMILY ROOTS. A backup is an exact copy made for the purpose of protecting yourself in case a diskette becomes damaged (dropping it in the dishwater, etc.). You may make a copy using any program you have that is able to copy an entire diskette. For your convenience we have also supplied a program to copy full diskettes; it is named (oddly enough) DISKCOPY and resides on the Auxiliary Programs diskette. In any case be very careful to distinguish the original from a blank to be used, so that you don't accidentally erase the FAMILY ROOTS programs. (If you do erase it accidentally, you may buy another from us for a nominal fee if you are a registered owner.) You should make backups of both program diskettes, and then use the backups after storing the originals in a safe place. (Safe places are not too hot, not easily bent, not wet and not magnetic.)

To use our DISKCOPY, turn on your computer (with nothing in the disk drives), place the Auxiliary Programs diskette in the drive that is

device number 8 (if you have only one drive, that's the one), and type

```
LOAD"DISKCOPY",8
```

Your computer will respond with

```
SEARCHING FOR DISKCOPY
```

and

```
LOADING
READY.
```

if you did everything right. When you get the blinking square (called a cursor), type

```
RUN
```

and follow the instructions. You will need two diskettes, one for each of the program diskettes to be copies (Main and Auxiliary). Be sure that the diskettes you use don't have anything valuable on them from a previous use, since they will be wiped out before putting FAMILY ROOTS on them.

Now that you've made your backups, you can start FAMILY ROOTS by turning your computer off and on and then inserting one of the program diskettes into the drive that's device 8 and type

```
LOAD"FR",8,1
```

If this is your first try, use the Auxiliary Programs diskette now so that you can tell FAMILY ROOTS about your hardware. If you did it right, your screen will show

```
SEARCHING FOR FR
LOADING
```

After a short whirl of disk drive activity, you will see our FAMILY ROOTS logo appear on your screen. Whenever you begin using FAMILY ROOTS, you should go through this procedure, since the other programs in the package won't work without it.

The logo will remain on your screen for about half a minute if you do nothing, or you can "get on with it" by tapping any key on the keyboard. On your screen you will see

```
PLEASE WAIT ...
```

followed by various messages that tell you what is happening at the moment. After several such messages (the number varies depending on

```
CHOOSE WHICH PROGRAM TO RUN, BY LETTER:

A)   EDIT          (DATA ENTRY)
B)   FREEFORMS (PEDIGREES/DESCENDANTS)
C)   STRUCTURES    (TRADITIONAL CHARTS)
D)   GROUPS        (GROUP SHEETS)
E)   PERSONS       (INDIVIDUAL SHEETS)
F)   LISTS         (NAME INDICES)
G)   PROGRAMS      (TRY ANOTHER DISKETTE)
```

TABLE 1. MAIN PROGRAMS MENU

```
CHOOSE WHICH PROGRAM TO RUN, BY LETTER:

A)   SEARCH        (EXAMINE FAMILY DATA)
B)   WORDS         (LINE EDITOR)
C)   EMPTIES       (SHOW UNUSED RECORDS)
D)   WHAT          (ANALYZE DISKETTES)
E)   MANAGER       (MASTER CONTROL)
F)   CREATE        (MAKE EMPTY DISKETTES)
G)   ADDRESSES     (MAKE ADDRESS LIST)
H)   RENUMBER      (MOVE RECORDS)
I)   READER        (PUT LIST IN MEMORY)
F)   PROGRAMS      (TRY ANOTHER DISKETTE)
```

TABLE 2. AUXILIARY PROGRAMS MENU

several factors), a menu will appear on your screen . A "menu" in general is a list of items from which you must make a choice in order to continue. This menu gives you a list of the programs you may choose to run.

Tables 1, and 2 show you what the program menus look like. The program diskette labelled as "Main" will have the EDIT, FREEFORMS, STRUCTURES, GROUPS, PERSONS, and LISTS programs for you to choose from, while the diskette labelled "Auxiliary" will have all the others, including the SEARCH and WORDS programs and the utilities. One of the first programs you should run is the MANAGER utility, described in the next section; this program sets values that allow the other programs to run and to use all of your hardware.

After finishing each program you are given the choice of ending your session or executing a different program. If you choose to end, you will be returned to BASIC with a

BYE ...

followed by the BASIC prompt "Ready". At this point you can run any other software, or if you want to return to FAMILY ROOTS, you may restart by inserting a program diskette in the disk drive that is device 8, and running as described above.

If you want to run a different FAMILY ROOTS program, you will be asked to load a program diskette into a certain drive and press a key on the keyboard when ready. You may select one of the program diskettes, but it should be the one that has the program you want on it. After you press the key, the disk drive will whirr and a menu of the programs on that diskette will appear. You've seen this before and may proceed as described previously.

You may own other programs that can be executed by typing

```
LOAD "GESHMELDA",8
RUN
```

(or whatever). In general you can't do that with the FAMILY ROOTS programs--they either die or give you error messages. You must go through the start-up sequences described above.

3.2 Setting Up CONFIGURATION

You must run the MANAGER program on Auxiliary Programs diskette as one of your first operations. This program writes a "data file" called CONFIGURATION onto the program diskettes. (Let's reiterate--onto the PROGRAM diskettes, not the DATA diskettes.) The CONFIGURATION file contains all the information on what hardware you are using and how to use

it, plus many items that affect how much space you will have available for your genealogy data storage. This section covers what you need to do to get started; section 10 on the MANAGER program covers selected subjects in more detail.

The CONFIGURATION file is preset for one particular system. If your system is different, you must change those items that are different, as described below. The preset system will usually be a Commodore 64 with 64K of memory, one 1541/71 disk drive, an Epson printer, and a 40-column display.

Run the MANAGER program using the procedure described in section 3.1, that is, boot the Auxiliary Program diskette, and select the MANAGER program when the menu appears. After a short wait, the first menu for MANAGER will appear, showing six choices. The ones we are most concerned with at this point are the first two:

setting your hardware controls, and
setting your system controls.

3.2.1 Setting Your Hardware Controls

Presumably you are following these instructions with your computer as you are reading. Select A for setting your hardware configuration now. You will see another menu that allows you to set three different types of hardware. When you select each of these, you will be led through a series of questions that allows the program to determine how to set its internal values for your hardware. You should go through all three hardware selections even if you don't have special hardware of that type. This is to ensure that the values are set right for you.

3.2.1.1 Setting Your Printer

The series of questions about your printer are needed for the program to know

1) whether you have a printer and where it is,
2) what kind it is (model or generic type),
4) whether you have a printer interface, and what kind it is, and
4) how wide your paper is.

The program first asks if you have a printer, which you presumably know how to answer.

Next we need to find out how to turn it on properly. That means finding out the device number. The device number is needed so the computer can know where to send its commands; this will almost always be device 4 unless you have done something strange with your hardware. You are

asked

WHAT IS THE PRINTER DEVICE
NUMBER (NOW 4)?

You can preserve the current value by pressing the RETURN key on the right of the keyboard.

Next we need to establish the kind of printer you have (that's for setting the printer controls, automatically). At this point the program displays a menu listing many different kinds of printers. If your printer appears on the list, select it by pressing the letter showing in front of it.

Many of the daisy wheel printers work almost alike, and can be selected by pressing J, which is labelled COMREX/SLVR REED/TRNSTR. In fact there are at least 20 different manufacturers of printers that have controls like those, and we didn't have room to put them all on the list. If your printer manual says something like "Diablo compatible", then that's the selection for you.

If your printer doesn't appear on the list, you have two other possibilities. The first is to try a selection from the list and then do some printing to see if it works properly. In other words, your printer may be there and you might find it by the trial and error method. If that fails, then the last item on the list, called DO MY OWN SETUP can be used. Since that involves some rather gory technical details and most people won't have to use it, we left the description of that for section 12.

Note that if you make a mistake in your selection, it won't hurt anything to do it again or to change it. In general there are only a very few things you can't change, and you will get a warning from the MANAGER for those. If you get no warning, proceed ahead.

Most printers are not specifically designed to work with the Commodore and need a special device called a "printer interface" in order to be able to accept commands and data for printing. MANAGER presents a menu of the more popular printer interfaces for you to select from. If your printer was made by Commodore, or was made to work with the Commodore (e.g. Okidata 120) select "no interface" from the menu. If your printer interface is not on the menu, you have three options: a) try several selections to see if there is one that works for you; or b) set the printer interface parameters for your device as described in section 12.2.1; or c) send us a copy of the manual for your printer interface--we will tell you how to set it up and return your manual to you.

Next, various widths of paper might be used. Usual ones have a usable width of 7.5 or 8 inches, and that is what you would normally specify. If you want a right margin wider than normal, you should select a smaller value. For example, specifying a usable width of 7.5 inches for paper that is 8 inches wide will leave a ½ inch margin on the right. Note that if the paper width you have specified doesn't match the paper you are using (e.g. saying 15 inch paper when you're using 8), the printouts won't look as they do in this manual. The same thing may occur if you haven't selected the right printer from the menu.

Printers that take a maximum paper size of 8.5 inches almost always can use only 8 inches of that. Setting the usable paper width larger than 8 inches for such a printer will not produce the desired results in FAMILY ROOTS.

3.2.1.2 Setting Your Disk Drives

The disk drive questions establish how many drives you have and how FAMILY ROOTS will reference them. Up to 4 drives are supported, and they are referenced as 1 through 4 when a program tells you to load a diskette in a drive. (For example, a program may tell you to place diskette 6 into drive 3.) You will need to establish the correspondence between the drive 1 through 4 references and where the drives are actually to be found, i.e. their device numbers.

For each FAMILY ROOTS drive number (1 through 4), you will be asked what the device number is. Disk drive device numbers must be 8, 9, 10 or 11. If your answer isn't one of those, MANAGER will ask you to try again. If you have two drives it is not necessary that they be devices 8 and 9 --for example, they could be 8 and 10, or 8 and 11. One of the device numbers MUST be 8, however; that is because the CONFIGURATION file contains the device numbers but the file has to be read from device 8 before those numbers can be used.

Commodore model 1541/71 disk drives are all set to be device 8 when you first turn the power on, as delivered from the factory. When you have more than one drive, the device numbers of all but one of them (the one that stays drive 8) must be changed before they can be used. This change of device number can be done permanently or can be done each time you start your session. If you want to do the permanent change, you should carefully follow the instructions in the 1541/71 manual about cutting the jumper(s), or setting the DIP switches at the back of your 1571 drive. Otherwise you can indicate to FAMILY ROOTS that you want to set the drive device numbers at the start of your session. There is a question for that purpose:

```
DO YOU NEED TO SET YOUR DISK DRIVE
DEVICE NUMBERS WHEN YOU
FIRST TURN THEM ON (NOW 'NO')?
```

If you answer this YES, FAMILY ROOTS will ask you to turn on the drives one by one whenever you use the START program. If you intend to always set the devices independently of FAMILY ROOTS (for example, using Commodore's DISK ADDR CHANGE program), you should answer the question 'NO'. Pressing the RETURN key preserves the previous answer.

3.2.1.3 Setting Your Display

The display questions determine the width of your screen and what colors you want to use. You are restricted to using 40 columns or less as your screen width; we are not aware of any 80 column adapters that work properly with FAMILY ROOTS. Note that the screen width and the printer width are completely independent. Data prepared on your 40 column screen may be printed in 80, 132, or more columns, depending on the capabilities of your printer.

The colors you may set are dependent on what kind of monitor or TV you are using. We can't make red if your TV won't. You may make 3 color selections, namely,

the letters themselves,
the background underneath the letters,
the border.

The screen instructions tell you how to make your choices. Common selections are white letters on a black background or vice versa. An example is provided in section 12.2.2.

3.2.2 Setting Your System Controls

When you finish with the hardware items, press 'return' to get back to the MANAGER main menu. Then select B for setting system controls. You will be presented with another menu containing five choices. You should review all five, but the most important before getting started is item C, for defining diskette formatting.

3.2.2.1 Setting Your Formatting Parameters

There are five parameters in FAMILY ROOTS that determine diskette formatting, three that you may select and two that are computed automatically. These are assigned values by us, but you may want to change them. Once these values have been selected and you have stored some genealogy information on your diskette, it will not be easy to change the values. When you select item C from the System Controls menu, you are first given a warning about changing the values. Then you are led through a series of question to allow redefinition of the three values.

The first of the three formatting parameters is the maximum number of characters per person. The value we supply (called the default value) is 254 characters. This must be large enough to accommodate all the "structured" information you want to store for each person. The value should not include the characters in the person's name since this is stored elsewhere. Also, references to other people (like father and mother) require only characters for the record number, not the full name. Some overhead is included in maximum characters per person, i.e. one character is required for each piece of information (called a "field", for example, Place of Birth) regardless of whether you store anything there.

If you choose a value too small, you will get messages from the EDIT program occasionally saying there is not enough space to store your information. You can usually cope with that by using abbreviations. If you choose a value too large, you will waste a lot of space on your disk but will seldom have any problems storing. It is usually preferable to choose a value on the large rather than on the small side. Most of our customers are using values in the range of 254 to 512 characters. You are not limited to that range.

The second of the three formatting parameters is the number of sectors available on one diskette. Each sector holds 256 characters and the number of sectors available on a newly formatted diskette is 664 sectors. About the only reason for reducing this would be if you want to allow for extraneous files on your data diskettes (not advisable.

The third formatting parameter, average length of a name, is used to define the space or name storage. The default value for the average length of a name is 26 characters. We have done averages on our own sets of names and found an actual average of 22 characters. Based on our experiences with hundreds of users, we have found that 22 is often too small, which is why the larger default value of 26 is now used. The character count should include first names (can be many), last name, married last name, title (if any), and 4 characters of overhead. If you plan to use the "title" part of the name for something like alternate spellings or your own custom ID number, you should account for that in selecting the average name length.

There is always space for a fixed number of people per data diskette with FAMILY ROOTS. Your three choices above determine what that number will be. If you are concerned about the capacity per diskette, Table 4 shows the diskette capacities for various selections. Since you can use as many diskettes as you need for data, the number per diskette isn't a limit on how much information you will be able to store overall. With a smaller number per diskette on a system using floppy drives, you may have to switch diskettes in the drives somewhat more frequently.

For sectors per diskette = 664

		MAXIMUM CHARACTERS PER PERSON				
		256	320	384	448	512
AVERAGE	20	570	475	399	342	304
NAME	30	546	455	377	338	299
LENGTH	40	522	432	369	324	288

TABLE 3. DISKETTE CAPACITIES

It is unfortunate that these difficult choices must be made before you are familiar with FAMILY ROOTS and how it works. The best way around this is to make a set of "test" data when you first start. In other words, don't get in a big rush to get everything stored as soon as possible. Enter information for 25 to 50 people with the view that you are just trying things out to see how they work. Then if it turns out you aren't satisfied with the results of your choices, you can return to MANAGER and start anew, but with a better understanding of the consequences.

3.2.2.2 Other Systems Controls to Consider

The first choice on the Systems Controls menu is for defining user fields. This is for defining up to 9 fields of your own choice. Typical fields might be SEX, OCCUPATION, DATE OF BURIAL, PLACE OF BURIAL, or DATE OF CHRISTENING. You do not need to define fields for birth, death, parents, marriages or children, since these already exist separate from these nine fields. It is not critical that you choose all your fields at this point. New fields can be added at any time. However, once you have added a field and stored data for it, it will be difficult to change or delete it; this would entail manually changing all the information you entered. See section 12.3.1 for more information.

You should review the maxima by selecting B from the System Controls Menu. It is not critical that these be set large enough at this point, since you may change these at any time. For example if you find that 15 children as a maximum limit is not large enough while entering your data, you would run MANAGER again to reset this to, say, 18.

You may set the "permanent" values assigned to your function keys (F1 through F8 on your keyboard) by selecting <D> from the System Controls menu. These values are used for repetitive entries in the EDIT program. You would probably only assign permanent values for a very frequently appearing name or place, and rely on the key-setting menu in EDIT itself for others.

The final System Controls menu choice is E. You should consider three of these values on this menu carefully, since changing them later may cause you problems, even though it is still possible to change them. The first item is a parameter that establishes the storage order for dates, i.e. day/month/year or month/day/year. The value is preset to YES to represent day/month/year which is standard for genealogy. If you want the other order, you should set the value to for NO. This does not affect what you are allowed to enter for dates, but does affect validity checking (e.g. Is the month number between 1 and 12?), date formatting for printout, and recognition of dates in SEARCH. (You may want to review a related parameter on this menu, PROMPT FOR DATE.)

The second item on this last menu controls whether an "Auto Date" field is used or not. If you have one, every time you change any piece of information for a person, this field will be changed to contain the date that you made the change. In other words, it is a "Date Last Changed" field. A field like this provides you some history for how and when your items get changed. If you are unsure about this, it is probably better to have it set to YES at first until you determine if it will be useful to you. It is not critical to set it now, other than that changing it later will leave part of your information with it and part without. You should be aware that it requires 8 characters for every person to use the Auto Date field, and those 8 characters could conceivably be more useful for something else.

The third item (fourth on the menu) is the "Separator in Names" character. We have set it to "%". It should be a character that will never appear in one of your family names. In making your choice, be aware that you can put something like

DAN (1841-1843, DIED YOUNG)

as a name. This is not a character that you will ever type when entering your names. It is used by the programs to pack the parts of a name together and to recognize how to unpack them as well.

3.2.2.3 Saving the Configuration and Exiting

Your should now be finished setting values for the CONFIGURATION file. The last thing you must do is actually save the file on EVERY program diskette. You do this by returning to the first menu for the MANAGER program (press 'return' until you have the first menu again) and selecting D for SAVE CONFIGURATION FILE. You will be asked which drive you want to save onto. Place your program diskettes copies into your drive(s) and select each drive in turn (remember the drives are numbered 1 through 4 according to your disk definition selections). You may need to switch diskettes if you have more diskettes than drives. When you

make each drive selection, the drive will whirr and you will be asked which drive again. To return to the main menu, type 'return'.

****
To reemphasize, please save the CONFIGURATION file on EVERY PROGRAM diskette copy, whether the copy is on diskette or on the hard disk. That means the Main, Auxiliary, and Utilities Program diskettes. The programs won't operate properly without doing this.
****

Select item F on the main menu to exit MANAGER. The next thing to do in getting started is to run the CREATE utility in order to make blank data diskettes.

3.3 Making Blank Data Diskettes

You need to prepare the diskettes that will be used for your genealogy data before you can store anything on them. You set up the FAMILY ROOTS files using the CREATE utility.

CREATE formats and puts empty data files onto your data diskettes. You MUST have run MANAGER and followed the procedures described in section 3.2 before you run CREATE. The empty files that are created are for your names and family information, along with a control file. The control file allows each program to determine the identity of the data diskette (its number) and has parameters in it to prevent incorrectly writing on it, i.e. to prevent destroying your data. The diskette number is not actually set until you attempt to use it with the EDIT program. Be sure to use either a new diskette or one without anything important on it, since formatting destroys its previous contents.

When you run CREATE, it will take a while to complete its operations. You can tell how far it has gotten because of messages that appear on your screen. We can't give you an estimated time because it depends on the parameters you chose. Plan on several minutes at least.

Since the data diskette identity is not set by CREATE, you may make additional blanks by copying the first one you make. (You may use our DISKCOPY program, the same one mentioned when we talked about backups.) You may find it advantageous to preserve a blank data diskette for the purpose of copying it for new blanks when you need them. How many blank diskettes will you need? At least one, but it won't hurt to make several others now. You can add others later as you need them. There is no limit to the number of data diskettes possible.

After you've made your blanks you may proceed to put data onto them using the EDIT program.

3.4 Definitions, Conventions, and Miscellaneous

This section provides various odds-and-ends of information that will make it easier for you to understand the detailed discussion of each program. This includes the conventions we will follow in describing operations and examples, plus general philosophy on how the programs are designed.

a) 'return' refers to the use of the RETURN key on the right of the keyboard, not to the typing of the individual letters R E T U R N.

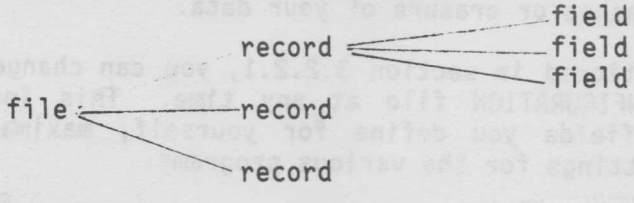
b) Program outputs will be shown in the manual as all capitals. Actual program outputs are in both upper and lower case.

c) Your responses will be shown by enclosing them in pointed brackets, for example <2>. You shouldn't type the brackets.

d) If a single letter is an appropriate response to a question, no 'return' following it is required. If a number is an appropriate response to a question, a 'return' is always required.

   Most menu selections ask for a letter as your response; according to this rule, no 'return' would follow. A few menus use numbers, implying that a 'return' is needed to end your response. Yes/No questions are answered with the single character Y or N without a following 'return'. Since disk drives are numbered, any response to a question asking for a disk drive number is always ended with a 'return'.

e) A file is a large collection of data or information on all your people. A file is composed of records. Each record applies to one person. Each record is composed of fields. Each field is a piece of information like 'date of birth'.



f) If any program asks you a question you don't want to answer, press 'return'. If you are progressing logically in an undesired direction, press 'CTRL-Z', (that is, hold down the key marked CTRL, and press Z at the same time). The programs are designed to use these as the null answer and escape condition, respectively. You won't ever hurt anything by using them.

   As a general rule: if in doubt, press 'return'.

g) The seven programs EDIT, FREEFORMS, STRUCTURES, PERSONS, GROUPS, LISTS and SEARCH all operate on the same highly structured set of data. These data are stored in the two files NAMELIST and FAMILY on every data diskette. As the names suggest, NAMELIST stores the list of names that you enter, while FAMILY stores the data for each person (described in the section on EDIT).

h) The programs are designed to allow you to place any data diskette in any drive. The major programs check every floppy drive as one of their first operations. This implies that you should normally have SOME diskette in every one of your drives when a program prompts "PRESS ANY KEY WHEN YOUR DATA DISKETTES ARE IN THE DRIVES." The programs can tell whether each diskette is a data diskette or not. They will not try to write on or read a diskette which isn't to be used for data.

i) The FAMILY ROOTS programs refer to the disk drives using numbers 1 through 4. The correspondence of FAMILY ROOTS drive number to hardware device number will be as you set it up in MANAGER, as described in section 3.2.1.2.

j) The FAMILY ROOTS programs will refer to your data diskettes by number. For example, a program may tell you to insert diskette 8 into drive 4. The diskette number is set when you first write something on it using the EDIT program. You should PHYSICALLY write the diskette number on its label (using a SOFT TIPPED PEN to keep from damaging it) so that you can find it when it is referenced. You may use the WHAT utility to determine the diskette number and range of record numbers on it if there is any problem.

k) You should not switch the diskettes in a drive unless told to do so, or unless you are on a main menu and can tell the program to check the drives. Switching diskettes under other circumstances may cause program crashes or erasure of your data.

l) Except for items mentioned in section 3.2.2.1, you can change your settings in the CONFIGURATION file at any time. This includes hardware settings, fields you define for yourself, maxima, and default parameter settings for the various programs.

m) We update FAMILY ROOTS periodically and send you notification of major updates in a letter. You may send us any diskettes for current copies of the programs, so long as you are a registered user. You may also buy new diskettes containing the current version of the programs. In fact, you may do this at anytime, even if a new update has not appeared.

n) If we use the words "input" and "output", we are using the viewpoint of sitting inside the computer. Thus "output" means taking something from the computer's memory and placing it on your screen, printer or diskette. We have tried to avoid these two terms, but sometimes no others can be used as easily.

o) For your convenience, all special characters (mainly control characters) used by FAMILY ROOTS are summarized in Appendix A.

p) References to a "main menu" must be taken in a context. For example in the section on the STRUCTURES program, "main menu" refers to the STRUCTURES Main Menu, which can be distinguished on your screen by the title at the top. Similarly, in the GROUPS chapter, the term "main menu" refers to the one for that program. Occasionally we may have referred to the menu of programs as a main menu, but we hope to have eliminated that confusing reference in this edition of the manual.

q) A list of error codes may be found in Appendix C.

r) A glossary defining some of the (perhaps) less familiar terms is to be found in Appendix H.

s) The letters "RN" are used in this manual to denote "record number", wherever this appears in displays or printed forms. Those letters are, in fact, defined in the Configuration file and can be anything you want. A very common use is "ID" instead of "RN," but we didn't use "ID" in this context because of possible confusion with other capabilities (see next section).

t) A "standard data diskette" is one of those made using the CREATE program. A "text data diskette" might have a variety of files on it, but would not have the FAMILY and NAMELIST files from a standard diskette. A text data diskette is one used with the WORDS program or your word processor. A "scratch diskette" might also have a variety of files on it but not those from a standard diskette. A scratch diskette is generally used for temporary, short-term storage.

3.5 Record Numbers and ID Numbers

Users who have been doing genealogy prior to buying Family Roots may have been using an ID or identification numbering system. In general, these numbering systems allow you to determine the relationship of any person to some other person in the genealogy simply by inspection of the number. To look at it another way, there would be a meaning inherent in the choice of the string of digits, letters, and punctuation that shows a relationship to someone else.

There are a wide variety of such ID numbering systems in use. A common one starts with the first ancestor to come to America, and numbers him as 1. His children might be numbered sequentially as

1-1
1-2
1-3

Each of their children would have additional dashes and numbers, e.g. 1-2-2 would be the second child of the second child. Notice that you can determine the relationship to the original immigrant just by looking at the ID number.

Family Roots uses a numbering system for linking people, which is called the "record number" in this manual. The record number shows where somebody's information is stored. In general, you can't determine the relationship of one person to another in the genealogy just by looking at the record number. For example, record number 233 could be just about anybody; looking at the number by itself doesn't tell you much. The number 233 would be used as an entry to tell the programs that 233 is the mother of 190, causing the people to be linked and making the generation of the various forms possible.

Family Roots recognizes the existence of ID numbering systems when such numbers are placed in "user defined fields"; please see section 12 for information on how to add one of those. Even if you have ID numbers, you still must still use the Family Roots record numbers. In other words, you will have two systems, one that shows location of information and the other that shows genealogical relationships.

With the two systems, you must use the record numbers to link people together. For the various charts and other forms, you have the option of showing either the record number or the ID number with the name (neither one is an option too). For example, your forms can be generated with the names showing as

MARGARET HOPPELDINGER (ID=1.2.1.1A) or as
MARGARET HOPPELDINGER (RN=233)

When you place your ID numbers in the designated location (the user defined field), they can be anything you like without any restrictions. You may use letters and punctuation, and the strings of digits, letters, and numbers can be as long as you want them to be.

The record numbers in Family Roots have to be positive integers. That means numbers like 1, 2, 3, ... 386, 387, ... 10255, etc. Those numbers can't have any extra characters like letters, dashes, or periods. That means you can't use a record number like 1A1 or 1.2.1 or 1-2-1 as the primary means for linking people within Family Roots.

There is a fixed relationship between Family Roots record numbers and where they are stored. Furthermore, there is space for a fixed number of people on every data diskette. As an example, if your data diskettes have space for 500 people on each one, record numbers (RN's) 1 through 500 would be on diskette #1, RN's 501 through 1000 would be on diskette #2, and so on. The programs don't care if you don't have a particular data diskette; for example, you could have diskettes #2 and #5 without #1, #3, and #4. If you don't know how many people are on one of your diskettes, you can use the WHAT utility program to find out.

Family Roots doesn't care how you select your record numbers. However, we suggest you choose a numbering system which doesn't leave your data diskettes too empty and which will not cause you to do too much switching of diskettes. We generally recommend choosing logical groupings of related people and assigning RN's to those people by ranges. As an example, if your system allows 500 people per diskette and you will be storing information on about 600 people eventually, you could put your father's line on one diskette by using the range 1-400, and your mother's line on the second diskette by using the range 501-1000.

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4. DETAILED USE OF EDIT

EDIT is the data entry program. Names of people for whom you want to keep records and a standard set of information can be entered and changed using this program. Begin by using FR to get into FAMILY ROOTS and selecting EDIT when the menu of programs is presented. Please see section 3 if you don't yet understand how to begin by using FR.

The message

PRESS ANY KEY WHEN YOUR DATA DISKETTES ARE IN THE DRIVES

appears on the display screen to give you the opportunity to insert one or more data diskettes. If you are just starting, place an empty data diskette (made with CREATE) in at least one drive and press any key.

It is not necessary to remove the program diskette if you have enough drives to have a place for at least one data diskette. Remember that there must be some diskette in every drive, even if you are not using it.

EDIT will read the diskette in each drive to find the location and identity of all the data diskettes. When it finds a new data diskette, it will ask you to identify the diskette in one of two ways:

1) You may supply the diskette number. If you are just starting, you probably want to call your first diskette number 1. Diskettes are numbered in sequence starting with 1 and continuing for as many diskettes as you need. Or,

2) You may tell EDIT one person's record number that will be on that diskette. Since record numbers are assigned to diskettes in a particular way, EDIT can tell what the diskette number should be if it knows one of the numbers on it. EDIT will tell you the diskette number if you choose this method. (You will have a better understanding of record numbers for people and how to use them after reading all of section 4.)

When EDIT gets the diskette number, the identification is written into the control file that resides on the diskette or volume. You should mark each data diskette with its number. We suggest writing a large sized integer on the diskette label with a soft-tipped pen to aid in rapid location and identification of the diskette.

4.1 Edit Main Menu

After the disk drives are checked, the EDIT main menu will be displayed. The menu gives you six choices. The choices are:

A) EDIT RECORDS

B) EDIT NAMES

C) SET FUNCTION KEYS

D) CHANGE PROGRAM PARAMETERS

E) CHECK DISKETTES

F) EXIT PROGRAM

The "records" referred to by the first menu item contain your family information, one record per person. The records and the names are stored in different places on a diskette so that the names can be rapidly accessed for a variety of purposes. For example, the display of data for one person will usually reference a wife, parents and several children, and these names are retrieved from the name storage location instead of stored in every record where they are referenced. A record number gets associated with every name that you store, as described in the next section, and it is this record number that is usually saved in a record rather than a name.

You may edit names using either menu choice A or B from the main menu, but it is usually better to enter a batch of names at the same time using item B first. The difference between the two menu choices, when working with names, is as follows:

1) For selection A, editing records, you may store only the name of the person the record is for, e.g. if you are entering birth, death, spouses, etc. for Millie Acorn, you can only enter the 4 parts of Millie Acorn's name while you are doing this, and not her parents, spouses or children.

2) For selection B, editing names, you may store the 4 name parts of a large number of people at the same time, but not their family data (until you return to the main menu).

The advantage of entering names first is that number references to names will show the names in the EDIT RECORDS menu. For example, suppose you are working with friend Millie and enter a record number of 23 for her spouse. When you look at the menu of what you entered, you will see the

name for the person having record number 23 displayed IF IT IS AVAILABLE. This gives you some confidence that you entered the right number. The name will be available for display only if you entered it first, either by editing the record for person 23 first, or by using the EDIT NAMES item from the main menu. If this still seems confusing, read the next sections and try it out--it will soon become clear.

After names have been set up as described in the next section, you can return to the main menu (also described shortly) and select A for putting your family information in those records. Selecting C lets you define what place or name each of the function keys is supposed to mean (the function keys are the ones labelled F1 through F8 on your keyboard). Selection of D gives you access to the program parameters that control the way the data you enter is stored; they are described in detail in a later section. Selecting E causes EDIT to read the diskettes in every drive to see what is where, and is what you should do after switching diskettes when you haven't been told to do so. Finally, selecting F for 'exit' allows you to move to another of the FAMILY ROOTS programs or to end your session; you should always get out of the program this way rather than turning the power off since EDIT has a final "clean-up" task to do that doesn't happen until you 'exit'.

If you are following these instructions in your first use of EDIT, press <B> now.

4.2 Editing Names

When you select Edit Names from the first menu in EDIT, you get another menu that looks like:

A) ADD NAMES
B) CHANGE A NAME
C) REINITIALIZE A RECORD
D) STORE NAMES ON DISK

Each time you make a select one of the name editing options, you will sequence through some questions and "fill-in-the-blanks" operations, and then return to this menu for your next selection. For example, if you choose to change a name, you will be asked which one, shown the name to be sure it's the right one, and asked for the correction to each of the name parts. You escape this menu by pressing 'return'.

4.2.1 Adding A Name

When you add a name, a record number gets associated with it that is used extensively by all of the FAMILY ROOTS programs. There are two ways that a record number can be assigned: you may choose each one yourself, or you may select records sequentially starting at some number

of your choice. The method that is used is controlled by a parameter that you can set on the CHANGE PROGRAM PARAMETERS menu, described in detail in a later section. If this is your first session with EDIT, it will probably be set to assign records sequentially starting with 1. Let's assume that's what you want to do for the moment, and come back to the other one later.

Your display should be showing the 'edit names' menu. You should choose the 'add a name' option by pressing A. At this point the program finds the next available record number and assigns the new number to the name you are about to enter. If you are just starting, this means that the first name you enter (yourself?) will become associated with the number 1 hereafter. The next name you enter (your wife?) will become associated with number 2. Similarly if you had just entered 22 names and you now enter **<Ethel Mason>**, the name 'Ethel Mason' is associated with the number 23 and the information for Ethel Mason will be stored in record number 23 (in the FAMILY file on diskette).

The EDIT program (and the others as well) views all names as having four parts:

1) last name at birth
2) first name(s)
3) married last name
4) title

When you enter a new name using the 'add names' option, you will be asked to enter each part separately. If one of the parts of the name doesn't apply (e.g. married last name) or you don't know it, just press the 'return' key. There is no limit on the length of a name, but you may have difficulties if you choose to use lengthy names as a standard practice. Any character except a 'return' and the name separator character (%) can be in a name.

"What should I enter for each of the parts?" you may ask. 'Last name at birth' is self explanatory. First names can be entered separated by spaces. In our own use of the program we have sometimes included nicknames in parentheses as part of the first name, but this should be used sparingly since it increases the length of the name. Another practice we have sometimes used is to put in a descriptive word or phrase where the name isn't known, e.g. "(BOY)" or "(JOHN'S FATHER)". Such imprecisions can be easily corrected later when you find the more exact information. 'Married last name' will normally be entered only for married females. Title is intended for such things as "JR.", "SR.", "DR.", "II", etc. However, since 'Title' is only printed/displayed and is not used when searching on names, you may put almost anything you want here, e.g. an alternate name spelling for the last name 'Rector' could be

entered as "(RICHTER)" in the title field. You can also leave the 'Title' field blank, which would be the normal case.

When you press 'return' after finishing with the title field, you will usually be returned to the "Edit Names" menu. To digress a moment, if you are entering only a few names during this session it is a good idea to jot down each record number and name on a piece of paper as you enter it. However, if you are doing extensive entry, the better procedure is to enter all names, exit EDIT, use LISTS to print a list of the names for you, and then return to the EDIT program for data entry.

The list of names and record numbers, whether handwritten or printed, gives you the most rapid access to the records in your subsequent data entry tasks.

Now suppose you wanted to enter several names in sequence starting at a different number, say 226. To do that you must reset the "next name" pointer on the Change Program Parameters menu. You don't have to return to the main menu to get there--just press **<P>** on the 'edit names' menu. Assuming you pressed P, you are now looking at a list of items. The one you want is G, NEXT NAME RN. Press **<G>**, and answer the question with **<226>** followed by **<'return'>**.

You could now enter several names starting at RN=226, the same as when you started at 1. One other thing could have happened before or can happen here, however. If you entered names at some other time and already assigned 226 to somebody, EDIT recognizes this and advances to the next unused record number. For example if 226 and 227 were previously assigned, you would see

```
RN=226 WAS ALREADY USED
RN=227 WAS ALREADY USED
```

followed by

```
USE 'RETURN' IN THE FOLLOWING WHERE YOU
DON'T HAVE A NAME OR THERE IS NO NAME
    (ADDING RN=228)
```

If you have a long sequence of numbers already used, EDIT could get carried away with itself telling you about all the RN's already used; you can stop it and return to the menu by pressing any key.

If EDIT advances to a number you don't want to use for your next name, for whatever reason, you can leave it blank by pressing **<'return'>** four times, once for each of the name parts. Answering CTRL-Z to any of the name parts does the same thing. In the above example you could avoid assigning a name to RN=228 in this way.

We deferred discussion on how you could assign your own numbers; let's see how that works now. You would use this if you had your own record numbering scheme.

To select number assignment, you must again move to the Change Program Parameters menu by pressing a <P>. The item of interest is letter F, ADD NAME SEQUENTIALLY. It is now probably set to Y for YES. Press <F> and answer the question with N for NO. You can see that the value has changed in the menu. Press <'return'> to get back to editing names.

Select ADD NAMES by pressing <A> from the Edit Names menu as you did before. This time EDIT asks you what RN you want to assign. You may choose any number, say <322>, followed by <'return'>. Then you will have the opportunity to enter the four name parts as described above. You may enter names in any order; 322, 12, 5, 1, 642, 641, 643 would be perfectly legitimate. As for the other method of name entry, EDIT checks to see if the RN you select already has a name assigned. If it does, you are told so and returned to the Edit Names menu with no entry allowed. (You may change the name using item B on the menu.)

FAMILY ROOTS does not restrict the record numbers you can choose. However, you should consider the consequences of choosing numbers that are far apart for people that are relatively closely related. Each person's name and information reside on one diskette and there is a fixed range of RN's on each diskette. If you choose numbers that are on different diskettes, you may have to do a lot of diskette switching in the drive(s) in order to print out a chart, family group sheet, or even an individual sheet if it has a lot of name references. This is partly a function of how many drives you have. For example if you have one drive, and put yourself on one diskette, your father on a second, and your mother on a third, you will need to be present to unload and load each of the diskettes 6 (yes six) times in order to print 3 entries on one of the predecessor charts. By placing all three people on the same diskette, you can start that same chart, walk away, and have it done when you return from your doughnut break. Similarly if you have three drives, the placement on 3 separate diskettes would pose no particular problem since you could have all of the pertinent diskettes loaded at the same time. Thus we suggest that your guiding factor should be to place relatively closely related people on no more diskettes than you have drives.

Notice that when we started adding names, EDIT seemed to assume that your normal method was to add names sequentially. You can change that. For information on how to make EDIT assume your method of name entry is by choice, see section 12 on the MANAGER program.

4.2.2 Changing A Name

Returning to the entry of names, you just finished entering a name and now have the menu before you. If you want to change a name, correct a typing error, or even check on the entry you just made, you should press **<B>** to select the Change A Name option. At this point the program asks you for the number associated with the name that you want to change. (You jotted down the number for that last entry, didn't you?) After you type the number, the program displays the name corresponding to the number and asks you if that's the correct name. If it isn't, answer **<N>** and you will be given another chance to enter the correct number. If there isn't a correct number (you got here by mistake or you just wanted to check your entry?), you can press 'return' in response to the question asking for a number, and you will be returned to the Edit Names menu. For example you might go through a sequence like

```
PERSON'S RN # <22>

   ETHEL MASON

IS THIS THE CORRECT ONE TO CHANGE? <N>

PERSON'S RN # <23>

   MILLIE ACORN

IS THIS THE CORRECT ONE TO CHANGE? <Y>
```

When you find the name that you want, EDIT gives you the opportunity to change each of the four components separately; it also tells you which part of the name you are looking at and what the current entry is. For those parts you don't want to change, press **<'return'>** and the old entry will be preserved. Similarly, to change a part, just type in the new part. For example suppose you wanted to change Millie Acorn to Millie Ann Acorn Jones. You would go through the following sequence:

```
LAST NAME AT BIRTH:
     CHANGE ACORN TO:  <'return'>

FIRST NAME(S):
     CHANGE MILLIE TO:   <MILLIE ANN>

MARRIED LAST NAME:
     CHANGE TO:     <JONES>

TITLE:
     CHANGE TO:     <'return'>
```

There is one situation that is a little tricky because of the use of 'return' when you don't want to change something, namely, how do you erase an entry? For example, suppose you had entered JR. in the title and wanted to delete it. When you are asked

CHANGE JR. TO:

you can't press 'return' because this leaves JR. unchanged. You can accomplish your goal by typing a CTRL-E (for "Erase", i.e. hold down the CTRL-key while pressing the E key) followed by <'return'>.

****
Reminder: CTRL-E erases an entry in a field.
****

After you change one name, you will again see the name editing menu. You can change other names, add more names, or reinitialize a name.

4.2.3 Reinitializing A Name/Record

The reinitialize option does a similar thing to the Add Names option, except it assumes that the name/record number has been previously assigned. Therefore you also must go through a sequence much as in the Change A Name option to assure that the right name and record are found. You might use this option if you accidentally entered duplicate names or if you decide not to keep a record for a particular person. Be careful with this option! If you answer <Y> to

MILLIE ANN ACORN JONES

IS THIS THE CORRECT ONE TO REINIT?

anything you may have entered for that person (birthdate, marriage information, etc.) will be irretrievably erased. When you answer <Y>, you are given the opportunity to enter a new name, and the information associated with that name (in the FAMILY file on the diskette) is set to empty. If you wish, you may leave the record as temporarily unused by pressing 'return' for each of the four name parts. Should you wish to later reuse this record, you can enter a new name using the Add Names option. You will be able to find your unused records easily since the LISTS program and the EMPTIES utility have ways to expose them.

When you have finished reinitializing a name and record, you will be returned to the name editing menu. You may continue adding, changing and reinitializing names until everything is entered to your satisfaction. You can then return to the main menu by pressing 'return'.

4.2.4 Storing the Names on Diskette

You don't really have to keep track of where the names are, but you may find it useful to know what happens. Each time you access a name, EDIT checks to see if that name is in the computer's memory. If it isn't it will load it in. Often in order to load it in it must also remove another set of names. The removed set is written back out to the proper diskette before the new set of names containing the one of interest is loaded.

As you work with your names, making various additions and changes, you will notice a fair amount of disk activity at times. This is sets of names moving back and forth from the diskettes.

At the end of your session of editing names, there may be several (perhaps as many as 75) that are still in memory and not yet on a diskette. You can force the names to the diskette at any time by pressing **<D>** from the 'edit names' menu. It is good practice to do this occasionally if you are entering quite a lot of names in order to avoid losing your work due to a power failure or some such problem. It is not essential that you force the save, however, since EDIT keeps track of what has been saved and will write names onto the diskettes when you exit to the main menu. Note that on occasion you may try to save names and nothing happens--this is because EDIT has already saved the names during the normal in-and-out swapping and won't repeat itself.

4.3 Editing Records

Having set up the names that you want to keep information on using the name editing features, you are now ready to store information for those people: select **<A>** for EDIT RECORDS from the main menu. When you do this, the program in effect asks you who you want to store information for by giving you another menu, the "access" menu. You may want to add or change information on a single person or for logical sets of people; the program supports various accesses of these kinds. For each person's record that you select, the program will show you what is currently in the record (one by one) and give you the opportunity to change selected items in it.

4.3.1 Accessing Records

The access menu will have at least 3 choices and may look like this:

```
EDIT RECORDS BY:

A) NUMBER RANGE
B) NUMBER LIST
C) NAME SET

CHOICE (A-C/P/K/M)?
```

The first two selections will ask for record numbers, and the third will ask for a name.

In general choosing the records you want by number is faster than by name since the program doesn't have to search the entire list of names to find the ones you want. Let's see how you would use each of the access methods.

Number Range. You would choose to edit by number range when you had just entered a new set of names in sequential order and wanted to store data for those people, or if you wanted to change data for names that you knew occurred in numerical order. When you select **<A>** from the access menu, the program asks

```
START NUMBER?
```

and

```
END NUMBER?
```

If you want only one number, say 22, you only need to answer the first question with **<22>** and press **<'return'>** for the second, and the program will assume that your range is 22 to 22. If you went through the sequence

```
START NUMBER? <22>
END NUMBER?   <23>
```

you would first be shown the information in record number 22 (the one for Ethel Mason in the examples given before) and given an opportunity to change whatever you wanted. When you tell the program you are finished with that one (described later), you would be shown the information in record 23 (the one for Millie Acorn in the previous example) and given the opportunity to change things there. When you finish with that one, you are finished with the number range you selected, and the program returns you to the EDIT main menu. If you find you are trying to enter data on too many people at one go, NEVER FEAR! You can escape

from the sequential display of records at any time by typing **<CTRL-Z>** (i.e. typing the CTRL-key and hold it down while you also press Z); you can remember this as "Z for ZAP". Be a little patient however since the CTRL-Z doesn't take effect immediately on typing it, but at the next logical break. Finally, if you got into this option by mistake, press **<'return'>** in response to the START NUMBER question, and you will return to the main menu.

Number List. You would choose to edit records by number list when you want quick access to the records for one or more people. The program asks you for numbers until you press 'return' as your only answer to one of the questions, without supplying a number. An example sequence could be:

```
FIRST NUMBER?      <15>

NEXT NUMBER?       <18>

NEXT NUMBER?       <2>

NEXT NUMBER?       <484>

NEXT NUMBER?       <'return'>
```

Note that you don't have to enter the numbers in any particular order, and in fact, when you are shown the data in the records for those numbers, they will come in the order that you entered them. The maximum number of numbers you can enter in a list like this is normally 99, but you can set this using MANAGER. The use of 'return' to end the list of entries lets you enter as many as you like without having to tell the program how many you want to enter first. If you press 'return' in answer to the FIRST NUMBER question, the program puts you back to the EDIT main menu.

The data in the records you selected are shown to you in the order you selected, and you are given the chance to change whatever you want. As described above, if you find that your list was a bit ambitious or that you need to do something else before continuing, you can type **<CTRL-Z>** to escape back to the main menu.

Name Set. Accessing records by Name Set works somewhat differently from the other two methods. You might use this to review and edit everybody with the same surname, the same first name, or the same married name. Alternately you may not have a person's number handy so you might ask for the records using the person's name. In any case the program asks you for three name parts as follows in order to search the list of names:

LAST NAME AT BIRTH?

FIRST NAME(S)?

MARRIED NAME?

After you supply one or more parts of a name, you will then be asked for a number range; this is the range of record numbers that will be checked when EDIT starts looking for the names you wanted. For each part of a name you supply, the program finds all records having all the supplied names. Several examples will illustrate this better than a lot of words:

1) LAST NAME AT BIRTH? **<MASON>**

FIRST NAME(S)? **<'return'>**

MARRIED NAME? **<'return'>**

This finds all records for names of people born MASON.

2) LAST NAME AT BIRTH? **<'return'>**

FIRST NAME(S)? **<ANN>**

MARRIED NAME? **<'return'>**

This finds all records for people having ANN as part of their first name, including, ANN, BETTY ANN, ANNIE, ANN MARY, JOANNE, etc.

3) LAST NAME AT BIRTH? **<'return'>**

FIRST NAME(S)? **<'return'>**

MARRIED NAME? **<HARRIS>**

This finds everybody who married a HARRIS (nominally female).

4) LAST NAME AT BIRTH? **<ACORN>**

FIRST NAME(S)? **<JO>**

MARRIED NAME? **<'return'>**

This finds everybody named JO ACORN at birth, including JOSEPH ACORN, JOSEPHINE AMANDA ACORN, EDDIE JOE ACORN JR., etc.

5) LAST NAME AT BIRTH? **<ACORN>**

FIRST NAME(S)? **<'return'>**

MARRIED NAME? **<HARRIS>**

This finds all the ladies born ACORN who married somebody named HARRIS.

Hopefully that gives you an idea of the power of this device. It also has its limitations. Every name in the number range you specified is checked to see if it meets your specifications, which means you will experience some delays while the search goes on. (Incidentally, you can abort the search by 'CTRL-Z' as described above, which will return you to the EDIT main menu.) Another limitation is that you can't search for everybody born an Acorn or married an Acorn at one time, but you can make two (or more) passes through the search. Also you may have noted that only the search on FIRST NAMES(S) searches for embedded names; the others (BIRTH and MARRIED) must match exactly.

The request for Number Range when you choose Name Set works quite similarly to the Number Range selection. You are asked

START NUMBER?

and

END NUMBER?

However, the results of pressing 'return' in answer to either of these questions is different. If you answer with **<'return'>** for the START NUMBER, the search will start at the smallest record number available in any of the drives. Answering **<'return'>** to the END NUMBER question will cause the search to end at the largest record number available in any of the drives; however, if there is a gap in the record numbers (due to a missing diskette number), the search will end at the highest number before the gap. As an example, if you had one data diskette in the drives and wanted to search the whole diskette, you could accomplish that by pressing 'return' in answer to both of these questions.

List In Memory. On your first pass through the access menu you saw only the three choices discussed above. Sometimes there is a fourth choice, LIST IN MEMORY. This choice only appears when there is a list of record numbers saved in the computer's memory. It could get there several ways. The most direct way would be from a previous use of the NUMBER LIST access method. A list is also accumulated in memory from the NAME SET access search. You would use lists of names like this if you were going through the same group of names several times, such as, if you wanted to enter everybody's parents first and then go through the same list to fill in dates. When you choose **<D>** on the access menu, there

are no further choices to make, and the records corresponding to the names in the internal list are retrieved for you to examine. As in the other access methods, you can use CTRL-Z to escape from the list to the main menu. Whenever you choose A, B, or C as your access, the list in memory is erased. You can display the list in memory prior to making your choice by pressing M.

That's not the whole story on LIST IN MEMORY. A likely use of this feature comes from executing the SEARCH program. In this case you would use SEARCH to find all people having certain common features in their data. In the process of doing that, SEARCH accumulates a list of those people in the computer's memory. When you exit SEARCH, one of your options is to run any of the other programs, including EDIT. If you did that, when EDIT started operating it would still have the list of names in memory that was generated by SEARCH. There are a wide variety of ways to use this, but let's consider one possible case. Suppose you had fairly complete information on your people with RNs in the range 95 to 250, but you wanted the opportunity to review and fill in any of those with missing date of birth. You would execute the SEARCH program and have it locate everybody in the range 95 to 250 with blank date of birth. Now you would return to EDIT and use the list of names in memory to edit only those records for people with the missing information. That means that your computer does the "sifting" for you, and lets you look at and change only the information of immediate interest to you. If you would like to consider other possibilities, please examine the capabilities for searching in section 10.

Disk Swapping. Let's look at what happens with your diskettes based on how you chose to access your records. If you use NUMBER RANGE, first one diskette will be used, then (if necessary) the next in sequence and so on until your range is exhausted. Each time one diskette is finished, EDIT will see if the next is available in one of the drives and use it if it is found. If EDIT can't find it, you will be asked to replace one of the diskettes with a message like

```
PLEASE PLACE DISKETTE NUMBER 3 INTO DRIVE 1
PRESS ANY KEY WHEN READY
```

If you do what the message says, everything continues normally. Suppose, however, that you made a mistake and you don't have a diskette number 3 yet. To get out of this situation, you can type **<CTRL-Z>** or answer the above with **<N>** (for NO); this returns you to the EDIT main menu.

Now let's consider NUMBER LIST. The records for the RN's that you supplied in the list are retrieved by EDIT in the same order you entered them. Thus if you gave EDIT a list like 2, 625, 4099, 626, 10253, 3, you might have to insert a different diskette each time the next record

is to be retrieved. As described above, EDIT will tell you which diskette to switch if it is necessary, and you can escape the switch with CTRL-Z or N. You should also note that if the order of the numbers isn't important to you, you might save yourself some annoyance by supplying the numbers in increasing or decreasing order, for example, 2, 3, 625, 626, 4099, 10253.

The NAME SET search may or may not cause any exchange of diskettes. If you pressed 'return' in answer to the request for the start and end record numbers, then only the diskettes in the drives will be searched. On the other hand, if you supply the number range and some of the numbers aren't on a diskette in one of the drives, you will get a request to switch. Upon such a request, you can either follow the instructions or abort to the EDIT main menu as described before.

4.3.2 Editing Individual Records

You're probably getting impatient to put data into records, if you've followed this so far, but it really doesn't take long to do all the above once you get used to it. If you've made a choice of records to access, you are now shown a display of the data in a record and asked if you want to change anything. The permanent fields in a record are shown in Table 4. We'll get into how and what to put in each of those fields in succeeding sections, but first you need to know in general how to edit a record.

You are given six choices in the question on whether you want to change something: Y/N/S/P/D/K. If you answer **<N>** for NO, the program retrieves the next record that satisfies your access selection or returns to the main menu if there are none. Answering **<Y>** for YES puts you into the normal editing mode, while **<S>** for STEP allows you to step through each data field in the sequence shown on the screen. (More on STEP in a minute.) Answering **<P>** lets you change one or more program parameters before returning to consider this same question again. Answering **<D>** recreates the display, in case you wanted to look at something that scrolled off the top of the screen. And answering **<K>** gets you the Set Function Keys menu, followed by a return to this question.

When you answer **<Y>**, the program asks you

CHANGE WHICH ITEM (0-10/S/P/D/K)?

For everyone:

1) BORN ON:

2) BORN AT:

3) DEATH DATE OR 'LIVING':

4) DIED/LIVING AT:

5) FATHER:

6) MOTHER:

7) NUMBER OF MARRIAGES:

8) NUMBER OF CHILDREN:

9) NUMBER OF NOTES:

For each marriage

a) SPOUSE:

a+1) MARRIED ON:

a+2) MARRIED AT:

a+3) MARITAL STATUS:

For each child:

b) CHILD #X:

For each note:

c) NOTE X:

TABLE 4. PERMANENT FIELDS IN A RECORD

Each data field is preceded by a number, and that is the number you use to tell the program which field to give you. For example, if you answer <2>, the program responds with

2) BORN AT?

Only the first several numbers always mean the same data item; when you start entering information for marriages and children, the list expands and the numbers change. If the numbers change, the screen display showing current entries regenerates itself automatically so you know which number to use. The letter choices have the same meanings as for the previous question.

You can answer questions and supply data until you are satisfied. After each number you supply and question you answer, the program again asks you which number you want to change. You can supply numbers indefinitely, even repeating ones previously given (to correct errors or make additions). If at any time you want to see the complete display of what is present, just press <D> (remember it as 'Display') in response to the request for an item. When you are all done, press 'return' in response to CHANGE WHICH ITEM; the program will store your data in the FAMILY file on your diskettes and get the next record you asked for. We suggest you try this out for a while if you are following this along for the first time, as it is much easier to do than to describe.

Each time you are asked to enter data, you can type whatever information you want, or you can preserve what was present before by pressing 'return'.

For example,

CHANGE WHICH ITEM (0-10/S/P/D/K)? <2>

2) BORN AT? **<LAS VEGAS>**

CHANGE WHICH ITEM (0-10/S/P/D/K)? <2>

2) BORN AT? **<'return'>**

results in LAS VEGAS being saved for "place of birth" even though you didn't type anything on the second try. This makes it very easy to continue if you typed the wrong number. On the other hand, sometimes you may want to erase some data completely; in this case, respond with a CTRL-E.

As indicated before, STEP takes you through the list of data items in the order seen on the screen. You can start STEPing by typing <S> either from the original question about whether you want to edit, or

from the CHANGE WHICH ITEM question. Numbers higher than 8 may change from what you saw on the original screen if you enter information on marriages or children, but for the moment ignore the numbers. As described above, 'return' preserves whatever data was there before. You may want to use STEP if you have a lot of changes, are starting a new record, or other similar circumstances. Don't worry about mistakes, since you will be returned to the other editing mode described above (supplying numbers) after you have gone through the list.

As delivered to you, EDIT will start STEP at item number 1. You can, however, set it to start at the field of your choice by setting a parameter in the Change Program Parameters menu. If you press **<P>**, you will be shown that menu; the relevant item is letter H, STEP START NUMBER. If you set it to 5, for example, you would begin any STEP sequence on the Father field, skipping over the birth and death fields. If you are using STEP and have changed enough fields even though there are more to come, you can escape to the menu of fields using CTRL-Z. This combination of features allows you to change short sequences of fields and return to the editing menu for further selections or corrections.

The name of the person associated with the record you're editing is shown at the top of the screen. What is not indicated is that the name can be accessed as field 0 (zero). If you do the following

```
CHANGE WHICH ITEM (0-15/S/P/D/K)? <0>
```

you will see the old familiar phrases

```
USE 'RETURN' IN THE FOLLOWING WHERE YOU
DON'T WANT ANY CHANGES
```

followed by something like

```
CHANGING MILLIE ACORN (RN=22)
```

or perhaps

```
CHANGING (RN=49)
```

The latter case is where no name has been entered yet. You can use this both to enter the name for the first time and to change the name.

The possibility of changing the name while editing the person's record was the main reason for providing the STEP START NUMBER parameter. If you usually want to enter or change names from here, you would set the parameter to zero, and conversely, if you don't, to one. You can do this using the Change Parameters Menu whenever you want to vary your

method, or you can select the value to be usually set one way or the other using the MANAGER program; see section 12 for more details on this possibility.

When EDIT stores data for your record, it also stores the same data in other records assuming certain relationships; see section 4.5 if you need to know about this now.

The following sections discuss entry of the four different types of information--counts, dates, free text, and people. Since the entry of counts exposes additional fields of the other types, it is discussed first.

4.3.3 Entering Counts

There are three different standard fields in which counts are entered--NUMBER OF MARRIAGES, NUMBER OF CHILDREN, and NUMBER OF NOTES. Each time you make an entry in one of these fields, the total number of fields and the field numbering may change, so the record display is usually regenerated if you're not in the step mode. Each of these fields is pretty much what the name implies but there are a few subtleties.

When NUMBER OF MARRIAGES is blank, all of the genealogy programs assume the information is unknown. If you enter 0 (zero), then that is different from being blank and is essentially saying the person is now single or was never married. If you enter 1 or more, then four new fields are added for each marriage, one for spouse, marriage date, marriage place and status. These fields are discussed in later sections.

When NUMBER OF CHILDREN is blank, the genealogy programs assume the information is unknown. This is different from entering 0, which would say that the person has no offspring now or never had any children. When you enter 1 or more, the program adds one field for each child, e.g. if you entered 14, then 14 new fields would be added. How to enter people is discussed in a later section.

For NUMBER OF NOTES, leaving the field blank is equivalent to entering 0, but the latter uses one character of storage in the record on the diskette. When you enter 1 or more, then one field is added for each note. How to enter notes is discussed later.

You may also have defined a COUNT or number field as one of your user fields. We have seen our customers using COUNT fields named NUMBER OF GENERATIONS and NUMBER OF ADDRESSES. A Count field that you have defined does not affect other fields like those above.

You may add a footnote indicator to NUMBER OF MARRIAGES, NUMBER OF CHILDREN or your own Count fields with the indicator referring to one of the notes. The program recognizes the carat "^" as the footnote indicator; this character was selected since it often prints as a vertical arrow, which is a common indicator for footnotes. The entry with footnote indicated would look like

NUMBER OF CHILDREN? **<3^2>**

which means "3 children, refer to note number 2"

You may also add what looks like a footnote to the NUMBER OF NOTES field, but this is interpreted as a note printing selector instead of a footnote. See section 4.3.5.6 for more information on footnotes and note selectors.

4.3.4 Entering Dates

There are two "permanent" date fields and another one for each marriage as described below. In addition you may have defined your own date fields, like Date of Burial. You may also be using an Auto Date field, which is set using a distinct method as described later in this section. Dates can be entered in various formats, and the program converts recognized ones to a standard format to facilitate display and searches. Footnotes on dates can be entered and are recognized by the program when printing or displaying.

There are four date formats the program recognizes. In the cases where two different orders are shown below for one format, you can use one or the other but not both. The order is governed by the Day/Month/Year control parameter set in MANAGER as described in section 3. The recognized formats are as follows:

a) month/day/year, e.g. 1/18/1968 or 1/18/68

   or day/month/year, e.g. 18/1/1968 or 18/1/68.

b) month-day-year, e.g. 12-9-1949 or 12-9-49

   or day-month-year, e.g. 9-12-1949 or 9-12-49

c) month day, year, e.g. May 9, 1963 or December 6, 1958

   or June 15 48 (comma is optional, spaces are required)

d) day month year, e.g. 9 MAY 63 or 6 DEC 1856 or 15 JUN 1948 (spaces are required).

In the last two formats it makes no difference whether you enter the month names in upper case, lower case, or mixed. You don't have to type the entire name of the month, but if you shorten it too much, the conversion uses the first month satisfying the abbreviation, e.g. J is January, JU is June.

If you enter only two digits for the year, EDIT adds 1900 to it. The value '19' for the century is stored in the CONFIGURATION file and can be reset using the MANAGER program. The passing of the century mark is not the only use for this--you might be entering a lot of dates from the 19th century, where it would be convenient to abbreviate 5/7/1836 to 5/7/36.

The recognized dates are converted to an eight digit string before storage. The order within the string depends on the order control parameter mentioned above. The two possibilities are

mmddyyyy for month-day-year, like 11031901,

or ddmmyyyy for day-month-year, like 03111901,

where the examples represent 3 November 1901. This example could be printed as either 3 Nov 1901 or the slashed format in the same order as stored (e.g. 11/03/1901 for the first one), depending on a parameter setting in the program you are using. Note that if you change the order control parameter using MANAGER, the order of the dates you have already stored does not change, which will result in dates being printed incorrectly until you edit them into the right format.

The use of the standard format minimizes the storage required and makes it possible to do searches on years, months and days. The conversion to the standard format also facilitates validity checking on the ranges for days and months. If you get a message like

THE MONTH IS OUT OF VALID RANGE

that is your signal that the date may need to be reentered, but you do, of course, have the option of ignoring it. When the EDIT menu for a record is displayed and a date value is present, the value is displayed in the standard format so that you can see exactly what is present in the record.

The standard date fields include the two "permanent" fields

1) BORN ON

2) DEATH DATE OR 'LIVING'

and a date field for each marriage, labeled

3) MARRIED ON

(the number preceding this might be 10 or 14 or 18 etc.). These are relatively self explanatory except for DEATH DATE OR 'LIVING'. If this field consists of the single letter L, then FREEFORMS, STRUCTURES, GROUPS and PERSONS display/print LIVING for the person; if it is blank, the programs assume you don't know whether the person is living or dead. Otherwise, the entry in this field is assumed to be a death date and the person is assumed to be deceased. When you enter LIVING or LIV, the program only stores the first letter, L, to conserve space.

You are not constrained to entering one of the standard date formats in date fields, and indeed such entries can be useful. For example a date of birth could be entered as "ABOUT 1833". On the other hand if you know some part of the date precisely, it is usually better to allow the program to store it in the standard format using an entry such as ??/??/1833. This allows the SEARCH program to use it. When you use a non-standard format, EDIT stores exactly what you enter, rather than converting it.

You may use footnotes on dates. You would add a footnote to a date to indicate source, uncertainty about year, or numerous other reasons. You enter the footnote indicator on the date by entering a date as described above (standard or non-standard), followed by the carat and a number, e.g.

3/13/1916^1 or 2 JAN 1980^3

The number that you use refers to the note that you will add later in a note field (see section 4.3.5.6).

There is no limit to the number of characters you can enter in a date field. You may have noticed that each time you make a data entry, you get a message about how many characters have been used in the record. The record length (256 characters or whatever you set it to during set-up) is the only real limit on data entry, i.e. any particular field may contain whatever you like in it, but the total number of characters in all the fields of a record can't add to more than the record length. The message that is displayed after each entry allows you to keep track of how much space you have left.

The Auto Date field, if you are using it, is not set using the methods described above. (The choice to use Auto Date is controlled by the MANAGER; see section 3). This field is set automatically any time you choose to edit a record, i.e. any time you answer

ANY CHANGES TO BE MADE (Y/N/S/P/D/K)?

with either Y or S. You can see the value in the field displayed immediately below the name in the record menu as

(Last Updated 5/15/1983)

The value for the date comes from the date prompt when Family Roots is booted, or from the DEFAULT DATE value you stored in the configuration file. The date is also accessible on the Change Parameters Menu as the last item. If you are using the Auto Date field, you should make it a practice to verify that the date shown in the parameters menu is correct before editing any records.

4.3.5 Text Field Entry

There are a number of fields in which you can enter textual data such as names. These are fields that can contain any information you want to put there.

Each text field is only limited in length by the size of the record, i.e. the sum of the length of all the fields can't be more than the record length limit (256 or whatever you set it to). It is advisable, however, to limit text fields to about 25 to 30 characters since they are printed in genealogy charts (when you elect to do so); overly long lines go to the edge of the printer paper or continue on the next lines, which doesn't keep the chart neat.

For footnotes you can use the carat "^" followed by a number to refer to a note field, as for dates. You could enter the supplemental information directly into the text field. Note the suggested restriction on long entries above however. You would use a footnote to indicate sources, possible alternatives, etc.

The text fields are as described in the following subsections.

4.3.5.1 Entering Birthplace

The second field label is shown as

2) BORN AT:

As noted above you can enter (almost) anything you want here, for example

RENO NEV

RENO; NEVADA^3

RENO, NEVADA (3)

RENO, NEV. USA (UNCERTAIN)

RENO NEV--FARM 7 MILES SOUTH

would all be acceptable entries.

4.3.5.2 Entering Address Or Place of Death

The fourth field label is shown as

4) DIED/LIVING AT

The entries that can be made here are almost the same as described above in 4.3.5.1, except that there is some special processing to allow recognition of a complete address. A complete address, including phone number, is useful for living persons, since these are the people in your family you may be contacting to obtain a great deal of the information on your relatives. The entry of a complete address is only recognized if the person is living, i.e., if there is an L for LIVING in the DEATH DATE OR 'LIVING' field (3).

A complete address is entered by separating each line by a semi-colon. For example

214 PINE ST.;RENO NEV. 89203;511-555-2221

would be such an entry. The PERSONS program will display or print this type of entry for an individual as

214 PINE ST.
RENO NEV. 89203
511-555-2221

The FREEFORMS, STRUCTURES and GROUPS program will extract characters between the last and next to last semicolons (usually the town and state) for printing in their forms, which in the example case would look like

RENO NEV. 89203

If you don't want the zip code to print in this situation, you may precede it with a CTRL-O (oh, not zero). If you use a semicolon between

the city and state for a full address entry, they will appear on separate lines in the first case, and the program will extract only the state for the chart.

If you don't want the phone number in the address (you may not want it or you may have put it in a separate field), you should make the last character a semicolon, e.g.,

214 PINE STREET; RENO, NEV 89203;

so that the town will be picked out properly.

If you enter a full address for a deceased person, no formatting or city/state extraction is done by the other programs.

4.3.5.3 Entering Text Fields You Defined See 3.2.2.2 + 12.3.1 p. 3-10

If you defined any fields for yourself, they will appear starting at menu item 5. The ones that you defined as free-text can have anything you choose in them. You may use footnotes on these fields by ending your entry with a "^3" or something similar.

Likely fields of this type would be OCCUPATION, SEX, PLACE OF CHRISTENING, PLACE OF BURIAL, and RELIGION. If you were entering information for OCCUPATION, that could be any of the following:

FARMER
DIETICIAN
COLONEL IN THE ARMY

or even

INVENTED THE PHONOTEL
IRASCIBLE OLD GOAT

4.3.5.4 Entering Marriage Place

After NUMBER OF MARRIAGES is entered (see 4.3.3) the menu will show a field labeled as

8) MARRIED AT

for each marriage. After you select the number (for example, 11, 15, 19, etc.) the program will display

11) MARRIED AT (MRG #1)?

The last item in the parenthesis shows you the marriage number, since there can be several such entries. You can put place names in this field, just as was described in 4.3.5.1.

4.3.5.5 Entering Marital Status

After number of marriages is entered (see 4.3.3) the menu will include one or more items labeled as

#) MARITAL STATUS

This one does have some unique characteristics. Marital status is viewed as the current or final status of a marriage (or potential marriage). EDIT recognizes the four usual status values

MARRIED
WIDOWED
DIVORCED
ENGAGED

and abbreviates these to the first letter in order to save diskette space. (Note that a person is recognized as SINGLE from your entry of '0' in the NUMBER OF MARRIAGES field.) The other programs expand these to the full word in their displays and printing. You are not limited to these four values and could enter anything else you want; if you do this, your entire entry will be stored.

Questions can arise as to which one of the four status values is appropriate, especially when dealing with marriages of deceased people. "Engaged" and "Divorced" are relatively unambiguous since both people in a marriage have the same status. But consider a marriage where one partner dies before the other -- is the status for both to be "Married"? In this case we have used "Widowed" for the longer-lived partner and "Married" for the other in our own use of the programs. You may want to avoid the issue entirely by using only "Married" or by creating your own status terms.

When you first enter marriage information for one of the three other marriage fields (SPOUSE, MARRIED ON, MARRIED AT), EDIT will automatically insert an 'M' for "Married" in the MARITAL STATUS field for that marriage. You can change the value if it isn't correct. For example, when you first tell the program there were two marriages for Millie Acorn, it saves eight fields, four for each marriage, but leaves each field empty. When you then fill in

14) MARRIED ON (MRG #2)? **<20 APRIL 1870>**

the program also automatically inserts an 'M' into field 16, the second Marital Status field.

If you are stepping through all the fields, you can change it when you come to it, or later. If you'd like to check to see if the M is present otherwise, use ***<D>*** *in answer to*

CHANGE WHICH ITEM (0-25/S/P/D/K)?

in order to regenerate the record display.

4.3.5.6 Entering Notes

After you enter something larger than 0 for number of notes (see 4.3.3), you can enter text for each of the notes. The program asks in the form

#) NOTE 1?

where "#" is a field number and depends on whatever else you have entered.

The note fields are intended for short notes of interest and for footnotes. Long passages of textual information should not be put here since they rapidly use up the available space and may not print or display very nicely in the other programs. Use your word processor or the WORDS program for storage of significant textual data.

Notes of interest could include sources or facts about the person that you want highlighted, e.g. a special invention or an event during the person's life. You could also include notes to yourself here about additional research needed. When notes are displayed or printed by the FREEFORMS and PERSONS programs, they are preceded by the note number and enclosed in parentheses, for example

(3: WAS RAISED BY AN UNCLE)

or (5: ADOPTED)

A note used as a footnote is referenced from other fields, as described above about the use of the carat '^'. Footnotes would generally indicate sources of information (the same note could be referenced from several other fields) or qualifications of some other field (e.g. "date not necessarily exact"). There is a way to distinguish footnotes used as sources from all other types of notes: use the footnote character "^" as the first "letter" of the note (this is called a "source flag"). You don't have to do this--it's optional--but if you do, you can generate group sheets containing sources more easily, since the GROUPS program won't ask you a lot of questions. See section 8.4 for more about use of sources, and section 8.5 for more about the parameter that controls whether the source flag on a note is checked. Other than using source flags, all notes would be entered the same way, without any distinction being made about the purpose of the note.

It has been stated in several places that the carat "^" is the footnote character. You can choose a different footnote character if this one

doesn't suit you by using the MANAGER program. Some caution is advised, however. If you have made extensive use of the carat and then change the footnote character to something else, the carat remains where you stored it with your data. On text fields this may not be important, but it is critical for proper decoding of the values in date fields. For example if you decide to use "*" instead of "^" for footnotes and have the date 11031901^2 somewhere in your data, it will be printed exactly like that instead of as 11 Mar 1901. Another impact of changing the character late is to be found in FREEFORMS. One of the parameters there is for suppressing the printing of notes in a chart. If you have this set to YES, the footnote references are also stripped from any other fields that get printed. Changing the footnote character will cause FREEFORMS not to recognize those you have stored, and they will be printed. If you do decide to change footnote characters, you can, of course, edit all the fields that have them to change the character to its new value. You can find all these fields using the SEARCH program.

If you put the footnote indicator in the NUMBER OF NOTES field, it has a special meaning (we don't think you needed a footnote to explain why you had 8 notes, or did you?). When used here it is a "note selector" that is used by FREEFORMS and PERSONS to select which notes are to be printed (depending on a parameter setting). The characters following the footnote characters should be a string of 1's and 0's that correspond to the notes and say, essentially "I want this one, I don't want that one, this one's good" etc. Let's see how this works with an example. Suppose you had the following notes:

(1: National Archives)
(2: History of Arkansas by Tyler)
(3: I'm not sure about this)
(4: Worked as engineer at World's Fair)
(5: Look for more info on this)
(6: Adopted)

If you were printing a chart that was to include some notes, you may not want the 3rd and 5th notes to appear. You could suppress them by placing

6^110101

in the NUMBER OF NOTES field for this person, and setting a program parameter (see later sections). The "110101 means "print" for each 1 and "don't print" for each 0, by position. The leading "6" is the number of notes, of course. Similarly, to print only the first 2 notes and suppress the rest you would use 6^110000 for NUMBER OF NOTES. If any notes that are suppressed also have footnote references from other fields, the reference is also stripped. In the above examples if you had 2^3 in the NUMBER OF CHILDREN field (showing you were uncertain about the number of children by referring to note 3), it would print only as "2", not as "2^3", if you suppressed note 3.

Since there is a tendency to type notes that are too long, EDIT includes a reminder message that occurs when you enter more than 25 characters for a note. The reminder asks

THAT NOTE IS A BIT LONG, REENTER?

If you answer **<Y>**, then you are given the opportunity to type the entire note again. If you answer **<N>**, the note is saved just as you entered it--no truncation will occur. For example

11) NOTE 1? **<SHE WAS A BIT BATTY>**

will not cause the reminder message to occur and the note would be saved as entered, while

11) NOTE 1? **<SHE WAS A BIT BATTY IN HER LATER YEARS>**

would cause the reminder to occur, and you could save it anyway or perhaps reword it. If you don't want to have this reminder, or if you want it to occur on something more than 25 characters, you can accomplish that using the MANAGER; see section 12 for details.

4.3.6 Entering People

There are three different types of standard fields for people, namely parents, spouses and children. The total number of fields is variable depending on the number of marriages and the number of children that you enter (see 4.3.3). You may also have defined your own people fields. All people fields are entered in the same way. You may also use footnotes in people fields.

In each person field you can enter either the person's record number or the person's full name. The two types of entries are NOT equivalent and the consequences of choosing one over the other are significant. If you choose to enter a full name, the name is stored (in the record you are editing) exactly as you enter it; the name uses space in a record equivalent to the length of the string. For example if you enter

6) MOTHER? **<AUDREY ACORN>**

in Millie Acorn's record, then 12 of the characters available in Millie Acorn's record will be used. On the other hand if you had set up a record for Audrey Acorn using the name editing features of EDIT (see 4.2), then you would have a record number for her, say 27. If you entered

6) MOTHER? **<27>**

in Millie Acorn's record, then EDIT stores only the number of Millie's record. Furthermore, any time that number is encountered in the displays and printing of all the programs in FAMILY ROOTS, it will be converted to the name you entered (or changed) for record 27. You can see this happen by entering such a number and then asking for a regeneration of the record menu (press D in response to CHANGE WHICH ITEM NUMBER). You should not mix the entry of names and numbers. For example, entering **<27 AUDREY ACORN>** uses 15 characters in Millie Acorn's record and is not recognized as a number. Similarly, entering **<AUDREY ACORN (RN=27)>** uses 20 characters and is considered a full name rather than a number.

Besides storage, there are other significant consequences of the choice between number vs. name which we'll talk about in a moment, but we need to go into some reasons for choosing one over the other first.

Most notably, whenever you use numbers you also have a record assigned for the person corresponding to the number, or intend to assign one soon. This implies that you want to keep track of information for this person about their life and relationships. This will be the usual case in your genealogy research. In some cases you will have names where you are not interested in maintaining detailed information; examples could include children who died young, selected spouses where there are multiple marriages, or non-related spouses of distant relatives. Rather than use some of your valuable disk space by allowing a full record for such a person (mostly empty in all probability), you would note the existence of these people only as full names in the records of the people with whom they are associated.

Another use of name over number could be when you have little information on a person, are not yet ready to start a record, but intend to change later. Note that since you can edit a record anytime, you can easily change from name to number or vice versa whenever you want. In our own research, we have found it to be less troublesome to use only the name first, and then convert to number when more information becomes available on a person, as opposed to creating a record and later deciding it wasn't needed. A little judgment is needed if you want to use your disk space to best advantage, but ultimately, the choice is your own--EDIT doesn't constrain you. However, as mentioned before, you need to be aware of the other consequences.

"Numbered names" (i.e. names which are associated with a record number) are the basis for several automatic update functions (called complementing) and for the linking of records to automatically produce genealogy charts and group sheets in the FREEFORMS, STRUCTURES and GROUPS programs. Thus when you choose to use numbered names rather than entering full names, the work-saving EDIT functions can occur and printouts can be produced. Complementing refers to the automatic

completion of information in records other than the one you are editing, e.g. inferring a parent relationship based on a child entry; a complete description is available in section 4.5.

The fields in which people can be entered are

```
6)   MOTHER
7)   FATHER
9)   SPOUSE or #)SPOUSE
#)   CHILD#1   etc.
```

plus your own fields (e.g. GODFATHER).

If you leave a field blank, no assumptions are made. When you enter people fields with record numbers, it is a good idea to verify your entries before going on to the next record you want to edit. When you regenerate the record menu, you can usually see the full name displayed for verification purposes. There are times when the name is not shown in this display; this is when a change of diskettes would be needed to retrieve the name. In this case you would see (NAME NOT ACCESSIBLE) followed by the number in the record display.

When you enter a name for a person, you aren't constrained to just the name. It can occasionally be useful to include other information in the field as well. In some cases have included the birth and death years of an infant who died young in the person's record, e.g.

```
15)  CHILD #2? <GEORGE FOOTE(1873-75)>
```

There is undoubtedly other such useful information you could include.

Footnotes are used in people fields in the same way as for others. For example entry of

```
6)   MOTHER?   <27^1>
```

would be recognized as record 27 with a reference to note number 1.

4.4 Using the Function Keys

The Function Keys are the keys labelled F1 through F8 on your keyboard. Specific meanings can be assigned to each key. For example, you you could define F2 to mean

```
RENO, NEVADA
```

Every time you needed to type "RENO, NEVADA" you could press F2 instead. You can use the Function Keys to make an entry, or part of an entry, in any data field in the EDIT program. These are great time savers!

You can set the meanings or "values" of the Function Keys within EDIT by selecting C from its main menu, or by pressing K from any other menu. These values are temporary assignments, and will go away when you turn the power off, boot Family Roots again, use the MANAGER, or use the LISTS program.

Permanent values can be assigned to the 8 keys using the MANAGER. The permanent values would be present whenever you first started EDIT but could be altered temporarily to anything you wanted.

If you select C for "set function keys" from the EDIT main menu, you might see:

CURRENT KEY VALUES ARE:

F1)
F2) ACORN
F3)
F4)
F5)
F6)
F7)
F8)

The current values for the keys, if any, are shown after the key. When you press the F1 key, you will be asked for a value. You can supply anything you wish. It is usual to use frequently occurring surnames, first names, and place names as values for the function keys. The prompt for a value and your answer would look like:

NEW VALUE FOR F1: **<RECTOR>**

After you supply the value, the first menu would reappear, but "RECTOR" would show as the current value for F1.

If any of the keys have current values and you want to change them, you can do that by supplying a new value. If you want to erase a value altogether, CTRL-E will do that job (E for erase). It isn't necessary to erase a value before replacing it.

When you have set the Function Keys as you want them, you exit this menu by pressing 'return'. You will be returned to the place you came from.

You may use any of your Function Keys while you are editing any of the fields, including the parts of a name. For example, suppose F1 has the

"RENO, NEV" value, and we are making an entry in the DIED/LIVING AT field. Your keystrokes might be

20 KREEBLE ROAD;F1;

You would see that as you type it on your screen as

20 KREEBLE ROAD;RENO, NEV;

and that's what would be stored in the field.

4.5 Complementing

Complementing refers to the automatic entering of inferred data in records other than the one you are editing. This section covers all the inferences used. In general complementing saves you considerable entry of data, because you only enter the information once and EDIT puts it in all the appropriate places. Nonetheless there may be times when you want to disable complementing, and you are provided six parameters under the CHANGE PROGRAM PARAMETERS option accessible from the EDIT main menu and several other places; see the next section (4.6) for details.

A word of caution is needed, too. If you make entries in a person's record, corresponding information will normally be stored in other people's records. Suppose you later find that a relationship you entered was in error and change it, e.g., a parent RN might be changed from RN 562 to RN 728. Complementing to the new record will occur, but information formerly inserted in the old record will not be deleted. In our example, information is inserted into record 728, but the information in record 562 remains unchanged and should be edited by you.

EDIT tells you on the screen when it is starting to complement. A message like

SAVING RN=52

appears for each record being changed, which lets you see what's happening.

The following discussion is fairly technical. You may wish to skip to 4.6, and only refer back to this when you have questions.

The following are the inferred automatic entries done by complementing:

1) If marriage information is entered for a record, the MARITAL STATUS field is filled-in in the same record if blank (mentioned previously).

2) When a FATHER or MOTHER field is entered for a record, the CHILD field is completed in the parent's record.

3) When a CHILD field is entered for a record, the appropriate parent field is completed in the child's record.

4) When any marriage information is entered in a record, the same information is placed in the record for the appropriate spouse.

5) When a CHILD field is entered for a record, that same child is placed in the record of the appropriate spouse; this inference is not always possible.

6) When a CHILD field is entered for a record, the opposite parent field in the child's record is completed if it can be determined from the spouse information.

7) When a DIED/LIVING AT field is entered for a parent, EDIT asks if the same place should be saved for each spouse and each child.

We will (hopefully) clarify what this is all about by going through an example for each case.

The automatic placement of an 'M' for married in the MARITAL STATUS field whenever you enter spouse, marriage location or marriage date was discussed in detail in 4.3.5.5; please refer to that section for examples. Note that this automatic entry only occurs when the MARITAL STATUS FIELD is blank. If the field is not blank, whatever is there isn't changed.

Next let's look at the entry of a parent. Suppose John and Millie Acorn have a child Yolanda, who have record numbers 4 (John), 23 (Millie), and 32 (Yolanda) respectively. When record 32 is edited (Yolanda's), you would enter

6) MOTHER? **<23>**

7) FATHER? **<4>**

After you complete your editing and type

CHANGE WHICH ITEM (0-15/S/P/D/K)? **<'return'>**

EDIT will retrieve record 23 (Millie's) and look to see if it has a child with record number 32. If not it will check to see if there is a blank spot available to put child 32 into (we're still in record 23). The check to see if Yolanda is present as a child in record 23 is not restricted only to the search for number 32; if it can find Yolanda's name, it will replace it with a 32, which then links the two records.

In any case child 32 will be inserted into record 23 if it's not there already; if no space was available EDIT increases the NUMBER OF CHILDREN field (in record 23) by one. After it goes through all this, it does the same thing again for Yolanda's father by inserting child 32 into record 4 if it's not there.

Continuing in order down the list, let's look at what happens when a child field is entered. Let's use the Acorn family again, records 4, 23, and 32. In this case we have the entry

14) CHILD #1? <32>

in either John (4) or Millie's (23) record. Consider Millie first. The program knows it has to get record 32 (Yolanda's) and put the number 23 (Millie's) in either the MOTHER or the FATHER field. How does it decide whether Millie is a mother or a father? If you have defined a SEX field, EDIT will use any information you saved in it. Otherwise it tries to use the parent's name to decide. In Millie's case you will have stored her name as FIRST NAME -- Millie, LAST NAME AT BIRTH -- 'blank', MARRIED LAST NAME -- Acorn. Since Millie has a non-blank married last name, EDIT infers that she is female and stores the number 23 in the MOTHER field for record 32, Yolanda. Now consider the case where child 32 was entered in record 4 for John. Again EDIT must retrieve record 32 and decide whether John is a father or a mother. It will use your SEX field, or check the name if that isn't available. In this case the absence of a married last name isn't sufficient to guarantee that John is a man (he might be an unwed mother or a divorcee with a name change), so EDIT asks for confirmation

IS JOHN ACORN MALE?

If you answer <Y>, then the number 4 is stored in the FATHER field for record 32, Yolanda. If you answer <N> then 4 would be (incorrectly) placed in the MOTHER field. Note that in all cases the entries in Yolanda's record (32) are made unconditionally, i.e. EDIT does not check to see if the MOTHER and FATHER fields are blank before changing them; you can make this conditional if you wish by changing a parameter discussed in the next section.

Now let's move on to the entry of marriage information, again using John and Millie Acorn. This case is completely reciprocal, i.e. the processing is the same regardless of which one is entered first. The fields to be substituted are MARRIED AT, MARRIED ON, and MARITAL STATUS. As you might expect, you can put whatever you want in these and no complementing will occur if you fail to enter the SPOUSE # as well, either during this pass at editing or previously.

Suppose the following entries were made in Millie's record (23):

10) MARRIED ON? **<23 MAY 1937>**

11) MARRIED AT? **<RENO, NEVADA>**

Then EDIT would want to store that information in John's record (4) but it would need to know which marriage this was, for John. In order to find out, EDIT asks you

WHICH MARRIAGE IS THIS FOR JOHN ACORN?

If you don't know and answer with a **<'return'>**, no complementing will occur. When you answer with a number, it fills in that marriage for John. Suppose you answer **<2>**. Then when you finish editing record 23 (Millie's) EDIT will retrieve record 4 (John's), increase the NUMBER OF MARRIAGES field (in record 4) to 2 if it's smaller than that, put 05231937 (or 23051937) into field 14 (marriage date for second marriage), put RENO, NEVADA into field 15 and put M into field 16. The substitution is unconditional, i.e. EDIT doesn't check to see if the fields are blank.

The complementing for MARITAL STATUS is a little different than the others. If you (or the program) entered 'MARRIED', 'ENGAGED', or 'DIVORCED', then the same thing is entered into the complement record. If you entered something other than the four standard values, no complement entry is made since EDIT doesn't "understand" it.

These cases get a little harder to describe toward the end of the list. The next case is the placement of a child into the spouse's record. Let's stay with John, Millie and Yolanda for the moment. Suppose you entered

14) CHILD #1? **<32>**

in Millie's record (23). EDIT then checks the marriage information in Millie's record to see if there are any spouses. If there is exactly one then that record is retrieved and the child placed in it if appropriate. Thus in our example EDIT retrieves record 4 (John's), checks to see if there is a 32 (Yolanda) in any of the CHILD fields, and inserts it if it's not there. In the insertion process the program may need to increment the NUMBER OF CHILDREN field if no empty field is available.

The insertion of a child is more complicated when there are multiple marriages with multiple spouses entered. EDIT recognizes one situation where it is able to insert the child, but must give up otherwise. This situation is when you have entered the child into the mother's record and EDIT is able to determine the father by matching last name at birth for the father and child. Suppose Millie Acorn had two marriages, the

first to Ralph Jones (say record 7) and the second to our friend John. Also suppose she had a child by each marriage, the first being Mary Jones in record 18. Then when Mary is the child that is entered, EDIT compares the "Jones" of Mary Jones with the "Jones" of Ralph Jones, finds they match and concludes that Mary should be entered into record 7 (Ralph). Similarly when Yolanda is entered, "Acorn" is compared to "Jones", found to mismatch, then compared to "Acorn" of John Acorn, found to match, and Yolanda gets inserted into record 4 (John's).

****
The important point for you to note out of all this is that you should always enter children into the mother's record in preference to the father's record if you want to save yourself some work.
****

The sixth case of complementing is the insertion of the opposite parent into the child's record when the CHILD field is completed. This one depends on the case discussed above, i.e. if it is possible to insert an entered child into the opposite spouse's record, then THAT opposite spouse is the appropriate parent for inserting into the child's record. For our example let's again use Millie's expanded clan. Suppose the entry in record 23 (Millie's) is as follows:

14) CHILD #1? **<18>** (Mary Jones)

Then as described above EDIT determines that Ralph Jones (record 7) is the father. Eventually EDIT retrieves record 18 (Mary Jones) and inserts the number 7 into the FATHER field (as well as the insertion of 23 into the MOTHER field described earlier). Again note that if multiple marriages are involved, you should enter children into the mother's record to save yourself some work.

The final case of complementing concerns place of living or addresses. This one doesn't depend on any of the previous ones but does depend on a parameter that explicitly turns it on or off, the fifth one in the list of parameters (see the next section). This case also works identically for either of the parents. If we assume the Acorn family above is still breathing and enter

3) DEATH DATE OR 'LIVING'? **<L>**

4) DIED/LIVING AT? **<2 COWPATH LANE; TAOS, NM>**

for Millie Acorn in record 23, EDIT would ask if that address was the right one for each spouse and child, after having saved Millie's data in her record. (If there is no "L" in the third field, no attempt at complementing will occur.) According to the above family relationships, you would see

```
IS RALPH JONES
LIVING AT 2 COWPATH LANE; TAOS, NM?     <N>

IS JOHN ACORN
LIVING AT 2 COWPATH LANE; TAOS, NM?     <Y>

IS MARY JONES
LIVING AT 2 COWPATH LANE; TAOS, NM?     <Y>

IS YOLANDA ACORN
LIVING AT 2 COWPATH LANE; TAOS, NM?     <Y>
```

For each <Y> answer that you give, EDIT stores an "L" in the DEATH DATE or 'LIVING' field for the person in question. According to the above answers, the two fields would be changed for records 4 (John's), 18 (Mary's), and 32 (Yolanda's) but not 7 (Ralph's). A <Y> is the only answer that causes storage to occur, i.e. if you press **<'return'>** because you don't want to answer the question, nothing will change. Storage is usually unconditional, i.e. if anything was in those two fields before, it is lost, but this can be made conditional by changing a program parameter (see the next section). Note that complementing of addresses only works in one direction of the relationship. Thus if you entered an address or locale for Yolanda, EDIT would attempt to complement for HER husband and children, not for her parents and siblings.

Four parameters are provided for your control of complementing as described in the next section. It is a good practice to check the complemented records to see if the data was entered accurately.

4.6 Changing Program Parameters

When you return to EDIT's main menu, you will note that the fourth menu item is

D) CHANGE PROGRAM PARAMETERS

If you select that now, you will see another menu of ten items as follows:

A) SHOW SIZE AFTER EACH INPUT
B) DO COMPLEMENTING
C) UNCONDITIONAL SUBSTITUTION
D) ENTER SPOUSE'S CHILDREN
E) COMPLEMENT ADDRESS
F) ADD NAMES SEQUENTIALLY
G) NEXT NAME RN
H) STEP START NUMBER
I) SAVE LAST RN ON EXIT
J) DATE

The last item won't appear if you're not using the Auto Date feature.

Each time you select an item (using the letter in front of the parameter name) and enter a value, you return to this menu. To escape back to the main menu, press 'return' instead of a letter. As noted in previous sections, there are many other places where you may access this menu as well. If you got here from other than the main menu, you will resume your previous operation when finished here.

The current setting for a parameter is shown after its name. You will see that most of them have Y/N (meaning Yes/No) for the current settings, except for G and H which have numerical settings and J which is the current date. EDIT responds to a selection by asking for a new setting. The ones with Y/N settings will be set by responding with a single keystroke without a following 'return'. The other 3 wait for the terminating 'return'. If you accidentally ask for the wrong parameter, answer the question with a **<'return'>** and the old setting will be preserved. You can then select the right one when the parameters menu is regenerated. Note that T/F (for True/False) and 1/0 (used in earlier versions) are valid keyboard entries for the parameters with Y/N settings; "on" means YES, "off" means NO when used in the following discussion.

We'll talk about the effects of each of the parameter selections below. This discussion assumes you have already read the relevant sections about EDIT. Note that the usual values can all be reset using the MANAGER program (section 12).

a) SHOW SIZE AFTER EACH INPUT. You will recall that a message is displayed after each data entry you make for a record showing you how much space is used in the record. While this is useful information, some people might find this message annoying. The occurrence of the message is controlled by the first program parameter and it is normally YES. If you set it to NO, the message won't appear.

b) DO COMPLEMENTING. The second program parameter turns all of complementing on or off; it is normally set to YES. If you set it to NO, the program will not do any of the complementing described in section 4. Normal use of this parameter might be to turn it off, make an entry or correction on which you were previously having a problem, then turn complementing on again.

c) UNCONDITIONAL SUBSTITUTION. The third program parameter controls unconditional complementing. When it is YES, complement fields are changed regardless of their previous content. When it is set to NO, EDIT checks the content of fields to see if they are blank before entering data. If the field is blank, the new data is

entered and if not blank the field is not changed. Unconditional complementing is normally set to YES, since the last data you enter is probably the most accurate.

d) ENTER SPOUSE'S CHILDREN. The fourth program parameter controls automatic entry of the spouse's children and of the opposite parent in the children's records. This capability is normally set to YES. You might want to set it to NO if EDIT is inaccurately making entries or if you don't like the order in which the names are inserted.

e) COMPLEMENT ADDRESS. The fifth parameter controls complementing of addresses. It is normally set to YES. If it is set to YES, the address questions are asked and fields changed when you give your OK. If it is set to NO, the questions are not asked and no complementing will occur. You would probably set this to NO if the families you are dealing with have grown children no longer living with their parents.

f) ADD NAMES SEQUENTIALLY. The sixth parameter controls how names are added. It is normally YES unless you reset it in the MANAGER. If it is set to YES, EDIT assumes that the next name you want to add should become associated with the RN in the seventh parameter, NEXT NAME RN. If it is set to NO, EDIT asks you what RN you want to use whenever you try to add a name. Your choice depends on how you prefer to add names.

g) NEXT NAME RN. The seventh parameter is the record number (RN) of the next name that will be added if sequential name addition is being used (parameter F). When you use EDIT for the first time, its initial value is 1. Every time a name addition is attempted, 1 is added to this parameter. After you have used EDIT at least once, the initial value may be either

    1) one more than the last value used,
or 2) the value in the CONFIGURATION file.

You would reset the value if you wanted to begin a sequence of names in a different place.

h) STEP START NUMBER. The eighth parameter is the start position for stepping through the fields when you are editing a record. It is normally preset to 1, which means starting on the Date of Birth field. You would set it to 0 if you wanted to change or add the person's name in addition to the other fields during the stepping procedure. It can be set to any other value as well and could, for example, be used to step through only the marriage information; the appropriate value for this depends on how many fields you defined for yourself.

i) SAVE LAST RN ON EXIT. If it is set to YES, the ninth parameter causes the program to save the last RN you used when adding names sequentially (parameter F on). If you didn't add any names at all or if you didn't try to add names sequentially (parameter F off), then nothing will be saved. If at least one name was added sequentially, EDIT will save the last RN used on the Main Programs diskette when you exit; if that diskette isn't available in a drive, EDIT will ask for it. If the parameter is set to NO, none of this occurs, regardless of what you did during your session. The default is YES, since you will usually want to resume adding names where you last left off when you next use the program. This parameter was added primarily for library users of FAMILY ROOTS, since formerly each user affected the next person that ran the program.

j) The last parameter is the date. This will appear only if you are using the Auto Date feature since EDIT has no other need for a date. The initial value is set from your clock if you have one, or from the CONFIGURATION file if you don't. When first starting EDIT it is advisable to check the date to be sure it is correct. The date is automatically stored in every record that you add or change.

   If you run another program from the Main Program diskette before using EDIT and change the date there, that new value will be the one used by EDIT.

4.7 Exiting EDIT

When you choose EXIT on the main menu or press **<'return'>** as your choice on the main menu, the EXIT menu will appear with one of four choices for you to make:

A) RUN ANOTHER PROGRAM
B) CHECK FREE SPACE
C) RETURN TO 'EDIT'
D) END SESSION

If you choose the first, EDIT must have a program diskette available (Main, Auxiliary, or Utilities) in a drive so it can show you what programs are available. It first checks to see if there is a program diskette available and reads it if so. (Remember that EDIT checked all the drives when you began, so it knows what is where.) If there is more than one program diskette available, EDIT will give preference to the drive EDIT was loaded from. If a program diskette is not available, EDIT tells you where to load one, with a message like

```
PLACE PROGRAM DISKETTE IN DRIVE 1
PRESS ANY KEY WHEN READY
```

EDIT then reads the program diskette, and the next thing you see on your screen is the menu of programs contained on that diskette. (Note: EDIT may "know" there is a program diskette already available; however, there is no way to prevent a crash if it tries to read it but you have removed the disk or switched it.

You may sometimes wonder how much space you have left in the computer's memory. You check it using choice B on the EXIT menu. The response may take a few seconds if you don't have much left. The number shown is the remaining space, in number of characters (or bytes). The number will remain displayed until you press a key on the keyboard, after which the EXIT menu is regenerated. Actually, it looks like the number just disappears. Note that this selection has nothing to do with space on a diskette.

If you didn't mean to get out of EDIT, i.e. you pressed the wrong letter or you pressed 'return' by misteak (oops), you can get back to the main menu by pressing <C> on the EXIT menu. You would also use this if you took a little detour to check on your free space before continuing.

Finally, the fourth choice on the EXIT menu is a true exit. When you pick this one, you are back at the BASIC level. If you do this by mistake, you can get back to EDIT by typing GOTO 20000. You should be a bit wary of doing much after a GOTO 20000 since the internals of the program can easily get messed up. It is usually better to restart by

```
LOAD"START",8
RUN
```

(where you put the program diskette in drive 1) if it is not essential to preserve something you just did. Note that person records and names are saved on the diskettes as you work, so there is seldom much of your data in memory at one time.

If you press <'return'> as your exit choice, that is the same as pressing <A>, i.e. it is assumed you want to continue your session using a different program.

4.8 Miscellaneous Information on EDIT

This section either reiterates or exposes various features of EDIT which you may find useful.

a) Whenever you see

PRESS ANY KEY TO CONTINUE

the program is pausing so that some information which may be of interest to you doesn't scroll off the screen (disappear off the top of the screen). You can go on by pressing any key, as suggested. The message is overwritten to make maximum use of the available space on the screen.

b) If you are editing a series of records and need to escape back to the main menu, use **<CTRL-Z>**. Be patient. The program will check for it at the next logical break point, not immediately. If you press some other key immediately after the CTRL-Z but before it has taken effect, the escape won't be detected.

c) In general if you have no answer for a question or no data to supply, pressing the 'return' key will either let you escape or preserve the previous data.

d) EDIT will not allow you to put more than the maximum number of characters, i.e. 256, or whatever you set it to, into a record. An error message will result if you try. You will be put back to the record menu to try to shorten the record if you elect to do so. The shortening effort doesn't need to be restricted to only the latest entries. The only constraint is on the total number of characters in a record, not on which fields contain them.

e) If you encounter an error and need to restart the program while preserving all prior conditions, type GOTO 20000. This will work most of the time, but not always since sometimes BASIC is confused. When you have to do this, your first action should be to store any work (e.g. added names) you have already done onto the diskette, just in case of further problems.

f) EDIT saves names on the diskettes in groups, usually 15. There is a fixed amount of space available for the 15 names, as defined by you when you used MANAGER the first time. Usually the space is quite adequate since long and short names will appear in any one group, and they balance each other out. Infrequently you may get a message

NOT ENOUGH SPACE FOR CHANGED NAMES

This means that you had a group of names that were all long and used up the available storage space. This group is not saved when the message occurs. To fix the problem you may shorten one or more names in the group, or you could disperse the names so that long ones don't all appear together as a group.

g) When you are ready to walk away from your computer, don't just turn the power off. Exit via the menus until you have selected 'end session' from the Exit Menu. This lets EDIT do any tidying up needed--the most obvious consequence is that the last sequential RN will be saved if necessary, making your next session easier.

h) Getting

NAME NOT ACCESSIBLE

on the screen where you expected to see a name does not mean an error has occurred. The above message appears only in the case where a disk swap message would make a mess of your display. Your names are OK on the disk but not available in memory to be displayed, without asking for a different disk in the drive. Each name is stored on the disk associated with its record number.

5. DETAILED USE OF FREEFORMS

The FREEFORMS program prints pedigree and descendants charts from the data you store on diskette using the EDIT program. Since the EDIT program is central to the understanding of the data, we suggest you read about EDIT if you haven't done so already. For the most part, options for specific data won't be discussed here. In order to get started with FREEFORMS, you can boot as described in section 3 and choose FREEFORMS from the programs menu, or you can get to the programs menu after having run one of the other FAMILY ROOTS programs.

The drive with the program diskette will whirr for a while as FREEFORMS is being loaded, followed by a message like

PRESS ANY KEY WHEN YOUR DATA DISKETTE IS IN THE DRIVE

Be sure that at least one data diskette is present and also that every drive has some diskette in it. When you press a key, FREEFORMS will read every diskette to find out the location and identity of the data diskettes.

5.1 FREEFORMS Main Menu

After the diskettes are checked, the FREEFORMS main menu will appear, giving you the following choices:

A) PRINT DESCENDANTS CHARTS
B) PRINT FREE-FORM PEDIGREE CHARTS
C) CHANGE PROGRAM PARAMETERS
D) CHECK DISKETTES
E) EXIT PROGRAM

The titles are fairly indicative of the function to be performed. The first two choices cause one or more charts of the type indicated to be printed on your printer. The program parameters that you can control mainly have to do with how things are formatted for printing. CHECK DISKETTES causes all of the floppy drives to be reexamined, in case you switched diskettes. And, of course, EXIT ends your session with FREEFORMS. In later subsections we'll discuss the results of each of these choices in more detail, as well as the parameters available.

5.2 Accessing Records and Names

When you select either of the first two options of the main menu, you will need to tell FREEFORMS which people or record numbers you are interested in. You are given a choice of specifying a number range, a list of numbers, or parts of a name, and sometimes a list in

memory. In fact this choice works nearly the same as in EDIT, and we suggest you reread (read?) section 4.3.1 if you need to refresh yourself.

Each person you select via the access menu is the starting point for a chart; you do not have to select all the people that you want to have appearing somewhere in the chart. Thus if you choose a pedigree chart for yourself, FREEFORMS determines all the relationships and includes the appropriate people -- your mother, father, grandparents, etc. Similarly a descendants chart for your paternal grandfather includes your father and his brothers and sisters, all their children, and so on.

For each name that satisfies your access selection, the name is retrieved from the diskette. If the diskette isn't available, you will be asked to load it into a particular drive. Once the name is retrieved, you will be asked a question like

```
PRINT FREE-FORM PEDIGREE CHART FOR
HENRIETTA TWINKLETOES WADSWORTH

OK TO CONTINUE (Y/N/D/P/C)?
```

with the specific type of chart to be printed mentioned. This gives you the opportunity to verify the selection before continuing with the chart.

Choosing **<Y>** or **<'return'>** sends you on your merry way, while **<N>** goes back to your access choices to find the next one. The 'D' means "Display" and can be used to display the chart on your screen rather than printing it. You might choose this to review the chart before printing or to show someone what FREEFORMS does without wasting a lot of paper.

The 'P' is here to let you access the CHANGE PROGRAM PARAMETERS menu before starting, since most of these affect how the various charts are printed (see 5.4 for more details). After using **<P>** you will be returned to this same place with the above question repeated. If you want to remove yourself from a self-made trap and return to the main menu, type **<CTRL-Z>**; this might happen if you were too ambitious with your access selections.

The 'C' choice means "continue" and is like answering **<Y>**, but with a further consequence. If you have made several access selections, answering **<Y>** will cause the "OK to continue" question to be asked for the next person too. If you answer **<C>**, the question won't be asked any more for the current set of access choices. This gives you the means to make several charts without having to baby-sit the computer.

5.3 Printing Genealogy Charts

You can print automatically generated charts showing either predecessors or descendants for each person selected as a starting point. Examples of several styles of free-form charts are shown on the following pages. On free-form charts you are given the option of printing only names or of printing both names and other information appearing in records on the direct lineage. It should be emphasized that FREEFORMS constructs the charts based on the numbers entered in person fields using the EDIT program; if you have entered a name rather than a number in a person field, only that name will appear on a chart and no further ancestors or children related to that name will be found or printed.

During the printing of a chart, it will not be unusual for FREEFORMS to ask you to switch diskettes. This is because a record number on one diskette refers to a record on another. When FREEFORMS asks

```
PLEASE PLACE DISKETTE NUMBER 3 INTO DRIVE 2
PRESS ANY KEY WHEN READY
```

just follow the directions. The diskette number refers to the one set up by EDIT, which should be marked on the diskette label (if it isn't, use the WHAT utility to figure out which diskette is which). If you don't have the requested diskette or you want to abort the chart, answer **<N>** or **<CTRL-Z>**; you will be returned to the main menu.

There are a large number of program parameters available to give you a variety of ways to vary your charts. Most of them apply to both the descendants and predecessors charts. The exceptions are the OMIT ALTERNATE PARENT, INSERT PARENT FIRST, and INSERT SPOUSE DATA parameters which apply only to descendants charts, and the USE JOINED LINES parameter which applies only to predecessor charts. Details on all of the parameters may be found in section 5.4.

We'll look at each type of free-form chart in the following discussion, describing how to read the charts and showing you some of the interesting variations possible using the parameters.

5.3.1 Printing Descendant's Charts

The descendants chart starts with the person you selected and shows all people (from your diskettes) directly descended from that person. Samples of descendants charts are shown in Figures 1 through 4 and will be discussed below. Although the figures don't show it, this chart can continue for many pages, depending on how much information you have, how many generations you choose, and what information you include.

The descendants chart may contain only names or you may elect to include selected information for each person in the chart as well. This choice is governed by the SHOW NAMES ONLY parameter, which can be set from the menu of parameters. It has a YES/NO value and is set by us to NO, meaning "include everything". Figures 1, 2, and 3 were made with names only, and Figure 4 was made showing full information.

The standard header printed for the descendants chart shows who the chart is for (i.e. whose descendants) and the date the chart was printed. You may use this header or define your own, as controlled by the parameter USE CUSTOM HEADER on the parameters menu.

After the main header, column headers are printed, like

```
                                        GREAT
                          GRAND         GRAND
PERSON        CHILDREN    CHILDREN      CHILDREN      etc.
```

You read the chart by following the vertical lines down the sheets. Thus, for example, all great grandchildren's names would appear immediately after (no spaces) the vertical line that begins from the

```
GREAT
GRAND
CHILDREN
```

header. In Figure 1 you should find the 3 children of Josiah Bice by following the CHILDREN line down the page, each of the children's children appear after the parent's name, etc. If you choose to print more generations than can comfortably fit the width of your paper under the usual scheme, FREEFORMS omits the header and reduces the spacing between the lines in order to squeeze everything in. The NUMERIC HEADER CODE parameter can affect how the column header will appear on the first and subsequent pages; see section 5.4.

In Figure 1 you will see that the alternate parent, i.e. the one not in the direct line, appears below the person it refers to. For example, Harriet Cochran is the mother of Alonzo W. Bice, as shown in the figure. This will be the position of the alternate parent when the INSERT PARENT FIRST parameter is set to NO, the usual case.

If you set the INSERT PARENT FIRST parameter to YES, the alternate parent is shown above the children, below the spouse, and indented slightly from where the spouse appears, as shown in Figure 2. Furthermore, the alternate parent will appear only once with all the children following: look at the figure for Mary Lucinda Bice's husbands for a good example of that. In order for this to work properly, FREEFORMS needs to be able to determine who the parents are for each child. If one of the parents is missing in a child's record or if the

child has no RN, then the program assumes parentage based on the order you have entered them in the parent's record on the direct line. That could cause erroneous charts if you haven't entered the children in the proper order.

If you prefer that the alternate parent not be shown at all, you can do that by setting the OMIT ALTERNATE PARENT parameter to YES. This parameter is the boss -- if it is set to YES, it doesn't matter what the INSERT PARENT FIRST parameter is set to. Look at Figure 3 for an example of a descendants chart without any alternate parents shown.

Figure 4 shows a descendants charts with more than just the names. You can define what fields you want to include in the form using the MANAGER. There are two other parameters that may alter the field selection for the notes if you have them as part of your form: SUPPRESS NOTES ON CHARTS and SELECTIVELY SUPPRESS NOTES. Please see section 5.4 for details on those.

If you want to include fields from the alternate spouse's record in the descendants chart, you may set the INSERT SPOUSE DATA parameter to YES. Making that selection causes the INSERT PARENT FIRST parameter to be set to YES as well. That's because the spouse's information would be repeated many times for the other format, an undesirable situation. Similarly, setting the INSERT PARENT FIRST parameter to NO will cause the INSERT SPOUSE DATA parameter to be set to NO too.

Information printed close to the right margin may try to run over. In that case, a new line is added and the extra information is aligned under the beginning of the line. See figure 2 for an example. Note that if you would like to have a wide right margin, you should set your available paper width in the MANAGER to a value smaller than the actual width. For example if your paper is 8½ inches wide, saying it is 7½ inches will leave a 1 inch margin.

5.3.2 Printing Free-Form Pedigree Charts

A pedigree (i.e. predecessor) chart starts at the left margin with the person you selected (one chart per person selected) and shows the ancestors of the person progressing toward the right. Samples are shown in Figures 5 through 8.

The free-form pedigree chart is related to the format used for the descendants chart, as you can see by comparing Figures 1 through 4. It also may contain names only or selected information for a person based on the setting of the SHOW NAMES ONLY parameters. With more than 3 or 4 generations selected, this type of chart often runs for several pages.

```
DESCENDANTS OF JOSIAH BICE  (RN=19)          Jan 1986

                          GREAT
                  GRAND   GRAND
PERSON    CHILDREN CHILDREN CHILDREN
¦         ¦        ¦        ¦
¦JOSIAH BICE (RN=19)
¦         ¦
¦         ¦ALONZO W. BICE (RN=175)
¦         ¦    MOTHER: HARRIET COCHRAN (RN=18)
¦         ¦        ¦
¦         ¦        ¦HARRIET BICE (RN=482)
¦         ¦        ¦    MOTHER: MARY DAVIDSON (RN=78)
¦         ¦        ¦
¦         ¦        ¦EMEL BICE (DIED AT 2) (NO RN)
¦         ¦        ¦
¦         ¦        ¦WALTEN BICE (RN=417)
¦         ¦        ¦    MOTHER: MARY DAVIDSON (RN=78)
¦         ¦
¦         ¦MARY LUCINDA BICE (RN=176)
¦         ¦    MOTHER: HARRIET COCHRAN (RN=18)
¦         ¦        ¦
¦         ¦        ¦HARRIET LAVINA MAPES (RN=419)
¦         ¦        ¦    FATHER: JACOB MAPES (RN=65)
¦         ¦        ¦
¦         ¦        ¦FLORENCE A. MAPES (RN=418)
¦         ¦        ¦    FATHER: JACOB MAPES (RN=65)
¦         ¦        ¦
¦         ¦        ¦ANTHEN D. HOSTETLER (RN=446)
¦         ¦        ¦    FATHER: HENRY ADAM HOSTETLER (RN=66)
¦         ¦        ¦
¦         ¦        ¦ROLLEY R. HOSTETLER (1883-6) (NO RN)
¦         ¦        ¦
¦         ¦        ¦ELMER B. HOSTETLER (RN=429)
¦         ¦        ¦    FATHER: HENRY ADAM HOSTETLER (RN=66)
¦         ¦        ¦
¦         ¦        ¦ROY W.D. HOSTETLER (RN=497)
¦         ¦        ¦    FATHER: HENRY ADAM HOSTETLER (RN=66)
¦         ¦
¦         ¦WILLIAM HENRY BICE (RN=16)
¦         ¦    MOTHER: HARRIET COCHRAN (RN=18)
¦         ¦        ¦
¦         ¦        ¦LAURA BICE (RN=17)
¦         ¦        ¦    MOTHER: ELIZABETH YEAST (RN=15)
¦         ¦        ¦        ¦
¦         ¦        ¦        ¦ESTHER JOSEPHINE MAYER (RN=20)
¦         ¦        ¦        ¦    FATHER: ERNEST JACOB MAYER (RN=13)
```

DESCENDANT'S CHART WITH NAMES ONLY

FIGURE 1.

```
DESCENDANTS OF JOSIAH BICE  (RN=19)          Jan 1986

                              GREAT
                    GRAND     GRAND
PERSON    CHILDREN  CHILDREN  CHILDREN
¦         ¦         ¦         ¦
¦JOSIAH BICE (RN=19)
¦
¦     WIFE: HARRIET COCHRAN (RN=18)
¦         ¦
¦         ¦ALONZO W. BICE (RN=175)
¦         ¦
¦         ¦     WIFE: MARY DAVIDSON (RN=78)
¦         ¦         ¦
¦         ¦         ¦HARRIET BICE (RN=482)
¦         ¦         ¦
¦         ¦         ¦EMEL BICE (DIED AT 2) (NO RN)
¦         ¦         ¦
¦         ¦         ¦WALTEN BICE (RN=417)
¦         ¦
¦         ¦MARY LUCINDA BICE (RN=176)
¦         ¦
¦         ¦     HUSBAND: JACOB MAPES (RN=65)
¦         ¦         ¦
¦         ¦         ¦HARRIET LAVINA MAPES (RN=419)
¦         ¦         ¦
¦         ¦         ¦FLORENCE A. MAPES (RN=418)
¦         ¦
¦         ¦     HUSBAND: HENRY ADAM HOSTETLER (RN=66)
¦         ¦         ¦
¦         ¦         ¦ANTHEN D  HOSTETLER (RN=446)
¦         ¦         ¦
¦         ¦         ¦ROLLEY R. HOSTETLER (1883-6) (NO RN)
¦         ¦         ¦
¦         ¦         ¦ELMER B. HOSTETLER (RN=429)
¦         ¦         ¦
¦         ¦         ¦ROY W.D. HOSTETLER (RN=497)
¦         ¦
¦         ¦WILLIAM HENRY BICE (RN=16)
¦         ¦
¦         ¦     WIFE: ELIZABETH YEAST (RN=15)
¦         ¦         ¦
¦         ¦         ¦LAURA BICE (RN=17)
¦         ¦         ¦
¦         ¦         ¦     HUSBAND: ERNEST JACOB MAYER (RN=13)
¦         ¦         ¦         ¦
¦         ¦         ¦         ¦ESTHER JOSEPHINE MAYER (RN=20)
```

DESCENDANT'S CHART WITH OTHER PARENT FIRST

FIGURE 2.

DESCENDANTS OF JOSIAH BICE (RN=19) Jan 1986

```
                                GREAT
                    GRAND       GRAND
PERSON    CHILDREN  CHILDREN    CHILDREN
|         |         |           |
|JOSIAH BICE (RN=19)
|         |
|         |ALONZO W. BICE (RN=175)
|         |         |
|         |         |HARRIET BICE (RN=482)
|         |         |
|         |         |EMEL BICE (DIED AT 2) (NO RN)
|         |         |
|         |         |WALTEN BICE (RN=417)
|         |
|         |MARY LUCINDA BICE (RN=176)
|         |         |
|         |         |HARRIET LAVINA MAPES (RN=419)
|         |         |
|         |         |FLORENCE A. MAPES (RN=418)
|         |         |
|         |         |ANTHEN D. HOSTETLER (RN=446)
|         |         |
|         |         |ROLLEY R. HOSTETLER (1883-6) (NO RN)
|         |         |
|         |         |ELMER B. HOSTETLER (RN=429)
|         |         |
|         |         |ROY W.D. HOSTETLER (RN=497)
|         |
|         |WILLIAM HENRY BICE (RN=16)
|         |         |
|         |         |LAURA BICE (RN=17)
|         |         |         |
|         |         |         |ESTHER JOSEPHINE MAYER (RN=20)
|         |         |
|         |         |MARY E. (MOLLY) BICE THOMPSON (RN=135)
|         |         |
|         |         |LEWIS BICE (RN=136)
|         |         |         |
|         |         |         |JUNE E. BICE (RN=403)
|         |         |         |
|         |         |         |ROGER WILLIAM BICE (RN=404)
|         |         |         |
|         |         |         |HAROLD B. BICE (RN=406)
|         |         |         |
|         |         |         |ELWOOD E. BICE (1916) (NO RN)
```

DESCENDANT'S CHART WITHOUT OTHER PARENT

FIGURE 3.

DESCENDANTS OF WILLIAM HENRY BICE (RN=16) Jan 1986

```
                                                GREAT
                                      GREAT     GREAT
                        GRAND         GRAND     GRAND
PERSON      CHILDREN    CHILDREN      CHILDREN  CHILDREN
|           |           |             |         |
|WILLIAM HENRY BICE (RN=16)
|     B: 07 Apr 1860 @ KANSAS
|     M: 29 Sep 1881 TO ELIZABETH YEAST (RN=15) @ YORK NEB
|     D: 05 Oct 1886 @ SO.OF WILLIAMSBURG VA
|     (1: ^DIED OF TYPHOID FEVER)
|           |
|           |LAURA BICE (RN=17)
|           |     B: 03 Sep 1883 @ O'NEAL NEBRASKA
|           |     M: 06 Jun 1916 TO ERNEST JACOB MAYER (RN=13) @ KLAMMATH
|           |        FALLS OREGON
|           |     D: 05 May 1970 @ LAS VEGAS NM
|           |     OCC: TEACHER
|           |     (1: ^A.B. DEGREE 1933 NMNU)
|           |     MOTHER: ELIZABETH YEAST (RN=15)
|           |           |
|           |           |ESTHER JOSEPHINE MAYER (RN=20)
|           |           |     B: 17 Oct 1920 @ KLAMMATH FALLS ORE
|           |           |     2 Marriages
|           |           |     M: 20 Aug 1939 TO HARRY MATTHEW VORENBERG (RN=23)
|           |           |         @ LAS VEGAS NM
|           |           |     Widowed
|           |           |     RM: 25 May 1979 TO HOWARD JONES (RN=24) @ AMARILLO
|           |           |        TX
|           |           |     Living @ AMARILLO TX
|           |           |     FATHER: ERNEST JACOB MAYER (RN=13)
|           |           |           |
|           |           |           |STEPHEN CARL VORENBERG (RN=1)
|           |           |           |     B: 13 Mar 1943 @ LAS VEGAS NM
|           |           |           |     M: 09 Jan 1969 TO PATRICIA JEAN MINGER
|           |           |           |         (RN=2) @ NASHUA NH
|           |           |           |     Living @ LEXINGTON MA 02173
|           |           |           |     OCC: ENGINEER
|           |           |           |     (1: CO-OWNER OF CHARTING COMPUTER)
|           |           |           |     FATHER: HARRY MATTHEW VORENBERG
|           |           |           |              (RN=23)
|           |           |           |           |
|           |           |           |           |SUSAN CAROLYN VORENBERG (RN=3)
|           |           |           |           |     B: 20 Nov 1969 @ CONCORD MASS
|           |           |           |           |     Single
|           |           |           |           |     Living @ LEXINGTON MA 02173
|           |           |           |           |     MOTHER: PATRICIA JEAN
|           |           |           |           |              MINGER (RN=2)
```

DESCENDANT'S CHART WITH FULL INFORMATION

FIGURE 4.

PREDECESSORS OF ESTHER JOSEPHINE MAYER JONES (RN=20) Jan 1986

```
                                GREAT
                      GRAND     GRAND
PERSON    PARENTS     PARENTS   PARENTS
|         |           |         |
|         |           |         |JACOB MAYER (RN=345)
|         |           |
|         |           |GOTLIEB FREDRIC MAYER (RN=12)
|         |           |         |
|         |           |         |CATRINA DONNER (RN=346)
|         |
|         |ERNEST JACOB MAYER (RN=13)
|         |           |         |
|         |           |         |GEORGE CHRISTOPHER SCHAEFER (RN=347)
|         |           |
|         |           |MINNIE SHAEFER (RN=14)
|         |           |         |
|         |           |         |MARIE BREHM (RN=348)
|
|ESTHER JOSEPHINE MAYER (RN=20)
|         |           |         |
|         |           |         |JOSIAH BICE (RN=19)
|         |           |
|         |           |WILLIAM HENRY BICE (RN=16)
|         |           |         |
|         |           |         |HARRIET COCHRAN (RN=18)
|         |
|         |LAURA BICE (RN=17)
|         |           |         |
|         |           |         |WILLIAM YEAST (RN=349)
|         |           |
|         |           |ELIZABETH YEAST (RN=15)
|         |           |         |
|         |           |         |FLORISSA ENGLE (RN=350)
```

FREE-FORM PEDIGREE CHART, NAMES ONLY, STANDARD LINES

FIGURE 5

PREDECESSORS OF ESTHER JOSEPHINE MAYER JONES (RN=20) Jan 1986

```
                          GREAT
                  GRAND   GRAND
PERSON   PARENTS  PARENTS PARENTS

                          |JACOB MAYER (RN=345)
                          |
                 |GOTLIEB FREDRIC MAYER (RN=12)
                 |        |
                 |        |CATRINA DONNER (RN=346)
                 |
        |ERNEST JACOB MAYER (RN=13)
        |        |
        |        |        |GEORGE CHRISTOPHER SCHAEFER (RN=347)
        |        |        |
        |        |MINNIE SHAEFER (RN=14)
        |                 |
        |                 |MARIE BREHM (RN=348)
        |
ESTHER JOSEPHINE MAYER (RN=20)
        |
        |                 |JOSIAH BICE (RN=19)
        |                 |
        |        |WILLIAM HENRY BICE (RN=16)
        |        |        |
        |        |        |HARRIET COCHRAN (RN=18)
        |        |
        |LAURA BICE (RN=17)
                 |
                 |        |WILLIAM YEAST (RN=349)
                 |        |
                 |ELIZABETH YEAST (RN=15)
                          |
                          |FLORISSA ENGLE (RN=350)
```

FREE-FORM PEDIGREE CHART, NAMES ONLY, JOINED LINES

FIGURE 6

FAMILY ROOTS
PREDECESSORS OF ESTHER JOSEPHINE MAYER JONES (RN=20) Jan 1986

```
                    GRAND
PERSON    PARENTS   PARENTS
|         |         |
|         |         |GOTLIEB FREDRIC MAYER (RN=12)
|         |         |     B: 10 Aug 1849 @ WURTENBERG GERMANY
|         |         |     M: 15 Oct 1879 TO MINNIE SHAEFER (RN=14) @ DENVER
|         |         |        COLO
|         |         |     D: ??/??/1922 @ PUEBLO COLORADO
|         |         |     OCC: MERCHANT/POSTMASTER
|         |         |     (1: STORE @ UNCERCLIFFE COL)
|         |
|         |ERNEST JACOB MAYER (RN=13)
|         |     B: 28 May 1884 @ SALINA COLORADO
|         |     M: 06 Jun 1916 TO LAURA BICE (RN=17) @ KLAMMATH FALLS OREGON
|         |     D: 21 Dec 1958 @ WAGON MOUND NM
|         |     OCC: ENGINEER
|         |     (1: BURIED TRINIDAD COLO)
|         |     (2: SOCIAL SECURITY 525-22-5761)
|         |         |
|         |         |MINNIE SHAEFER (RN=14)
|         |         |     B: 28 Dec 1856 @ SAXONY
|         |         |     M: 15 Oct 1879 TO GOTLIEB FREDRIC MAYER (RN=12) @
|         |         |        DENVER COLORADO
|         |         |     D: 05 Mar 1933 @ PUEBLO COLORADO
|
|ESTHER JOSEPHINE MAYER (RN=20)
|     B: 17 Oct 1920 @ KLAMMATH FALLS ORE
|     2 Marriages
|     M: 20 Aug 1939 TO HARRY MATTHEW VORENBERG (RN=23) @ LAS VEGAS NM
|     Widowed
|     RM: 25 May 1979 TO HOWARD JONES (RN=24) @ AMARILLO TX
|     Living @ AMARILLO TX
|         |         |
|         |         |WILLIAM HENRY BICE (RN=16)
|         |         |     B: 07 Apr 1860 @ KANSAS
|         |         |     M: 29 Sep 1881 TO ELIZABETH YEAST (RN=15) @ YORK
|         |         |        NEB
|         |         |     D: 05 Oct 1886 @ SO.OF WILLIAMSBURG VA
|         |         |     (1: ^DIED OF TYPHOID FEVER)
|         |
|         |LAURA BICE (RN=17)
|         |     B: 03 Sep 1883 @ O'NEAL NEBRASKA
|         |     M: 06 Jun 1916 TO ERNEST JACOB MAYER (RN=13) @ KLAMMATH
|         |        FALLS OREGON
|         |     D: 05 May 1970 @ LAS VEGAS NM
|         |     OCC: TEACHER
|         |     (1: ^A.B. DEGREE 1933 NMNU)
```

FREE-FORM PEDIGREE, FULL INFORMATION

FIGURE 7.

```
PREDECESSORS OF STEPHEN CARL VORENBERG  (RN=1)          Jan 1986

0       1       2       3       4       5       6       7       8       9       10
!       !       !       !       !       !       !       !       !       !       !
!       !       !       !       !       !       !(SHEJA'S GRANDFATHER) VORENBERG (RN=667)
!       !       !       !       !       !
!       !       !       !       !       !JOSIAS VORENBERG (RN=332)
!       !       !       !       !
!       !       !       !       !ISAIAH (SHEJA) VORENBERG (RN=204)
!       !       !       !
!       !       !       !SIMON VORENBERG (RN=8)
!       !       !       !       !       !
!       !       !       !       !       !HANNCHEN'S FATHER (RN=230)
!       !       !       !       !
!       !       !       !       !HANNCHEN (RN=227)
!       !       !
!       !       !WALTER VORENBERG (RN=21)
!       !       !       !       !
!       !       !       !       !MORRIS (SOLOMON?) HARRIS (RN=5)
!       !       !       !
!       !       !       !THERESA HARRIS (RN=9)
!       !       !       !       !
!       !       !       !       !LOUISA GUGGENHEIM (RN=4)
!       !
!       !HARRY MATTHEW VORENBERG (RN=23)
!       !       !       !       !
!       !       !       !       !SOLOMON HARBERG (RN=315)
!       !       !       !
!       !       !       !CARL HARBERG (RN=11)
!       !       !       !       !
!       !       !       !       !CAROLINA GOLDSMITH (RN=344)
!       !       !
!       !       !CAROLYN HARBERG (RN=22)
!       !       !       !       !       !
!       !       !       !       !       !(MOSES' FATHER) KLEIN (RN=248)
!       !       !       !       !
!       !       !       !       !MOSES KLEIN (RN=7)
!       !       !       !       !       !
!       !       !       !       !       !ROSA (RN=247)
!       !       !       !
!       !       !       !JULIA KLEIN (RN=10)
!       !       !       !       !       !
!       !       !       !       !       !SOLOMON HYMAN (RN=290)
!       !       !       !       !
!       !       !       !       !PAULETTE (BARBARA) HYMAN (RN=6)
!       !       !       !       !       !
!       !       !       !       !       !SARAH HOFFMAN (RN=289)
!
!STEPHEN CARL VORENBERG (RN=1)
```

FREE-FORM PEDIGREE, MANY GENERATIONS

FIGURE 8

The standard header printed for the free-form chart shows who the chart is for (i.e. whose ancestors) and the date the chart was printed. You may use the standard header or may define your own based on the setting of the USE CUSTOM HEADER parameter.

The advantages of the free-form chart are that a great deal of information can be packed into it and that it can show a large number of generations in one chart. Admittedly it may be a little difficult to read until you get used to it.

The column header at the top of the chart is your guide for reading the relationships (see Figure 3). For example if you follow the line down the page starting at

GRAND
PARENTS

everybody touching the line at the right is that relation to the person whose chart it is. If you start reading at the left of the chart, the father will appear above the person, one line right, while the mother will appear below. This continues as you progress to the right. If you examine Figure 5, you'll see that sometimes the mother or father is missing; in this case FREEFORMS doesn't leave a blank spot indicating omitted information. Only the information that is available is used, and it is packed into the available space.

There are two styles of vertical lines available for this chart. Figures 5 and 6 are identical except for the style of lines. The vertical lines will start at the top of each sheet and continue the length of the page with the USE JOINED LINES parameter set to NO. With the parameter set to YES, the vertical line will join the husband and wife, with the child breaking into the middle of the line at some point. We find that large, multi-page charts are easier to follow with USE JOINED LINES set to NO, but for small charts or a limited number of generations, the relationships are more readily visible with the parameter set to YES. It's a matter of personal preference.

The example in Figure 7 has all information from the records included with each person. The information applies to the name directly above it in each case, not to the name below. The selection of the fields to include may be defined in the MANAGER, but will be the same for both the descendants and pedigree charts.

If you choose to print more information than can usually fit the width of your paper, FREEFORMS omits the column header and reduces the spacing between the vertical lines, as shown in the example in Figure 8. For 8½ inch paper with 16.5 characters per inch size, this collapse will occur if you elect to print more than 10 generations. For larger print sizes, the collapse occurs at a smaller number of generations. This

feature allows you to squeeze many generations into a chart without being overly restricted by your paper width. You can control to some extent whether the English or numeric column header appears by setting the NUMERIC HEADER CODE, as described in section 5.4.

As with the descendants chart, information printed close to the right margin may not fit on one line. In this case it is aligned on the next line beneath the related data.

5.4 Changing Program Parameters

There are twenty-five parameters used by FREEFORMS that affect the way things are displayed or printed. A value is normally assumed for each of these parameters (called a default) so you don't have to worry about setting all of them when you're just starting. (You can change the starting values using the MANAGER.) There is a menu and procedure to change the values, accessed by pressing <C> from the main menu or by pressing <P> from one other place: in response to the question asking for verification of the name (see 5.3).

The menu shows a brief title for each parameter and its current setting, followed by the question

WHICH (A-Z)?

meaning "which letter". When you choose a letter, FREEFORMS asks you what you want the value to be. If you press <**'return'**> in response to the WHICH? question, you'll be returned to where you came from.

The following paragraphs discuss each parameter:

a) FIRST VISIBLE PARAMETER. This parameter's value is a letter between B and Z. It affects how the CHANGE PROGRAM PARAMETERS menu (the one you're looking at now) appears. The reason for this parameter is that there are more program parameters than there are lines on the screen to show them. You can see a different selection of them by resetting this parameter. The starting value is always B, which means you can see parameters B through N on the screen in addition to A (always present). As an example, if you set this to M, you will see parameter A plus M through 'Z' on the screen. The default value of the 'First Visible Parameter' isn't available for resetting via the MANAGER. Don't worry about pressing an illegal letter on this--FREEFORMS won't change anything if you do.

b) USE MONTH NAMES. This is a YES/NO parameter, normally set to YES. When it is set to YES, the three character abbreviation for the month is used in printing all dates where this is possible. An

example date of this type is 13 Jun 1926. If it is set to NO, the date is printed with all numbers using the familiar slashed format. In this case the order of the day and month depends on the value you selected for DAY/MONTH ORDER in the MANAGER program. An example of this format would be 25/06/1922 in the order day-month, and 06/25/1922 in the order month-day. The standard order for genealogists is day-month. Imprecise dates such as About 1850 are printed exactly as stored, and are not affected by this parameter.

c) MAXIMUM GENERATIONS. The default is 7, the nominal maximum is 10 and the minimum is 1. The maximum can be reset using the MANAGER. The number means generations not including the person selected, e.g. 3 for predecessors includes great-grandparents. This number is the limit on number of generations that are printed on the free-form charts. If your information doesn't reach the limit then it doesn't affect your printout. The column header for this number of generations is printed.

d) SHOW ID WITH NAMES. The default is YES. This causes the person's RN number to appear with any name that is output. The choice of RN vs. ID is governed by the SUBSTITUTE SPECIAL ID parameter. The number is printed after the name. Showing an RN or ID with a name sometimes helps resolve ambiguity in cases where you have people with identical names. You may want to set this to NO before printing charts for sending to your relatives.

e) TOP-OF-FORM AFTER PRINTS. The default is YES. This applies only to the printer. This causes the printer to move the paper to the top of the next sheet whenever it finishes one printing task, i.e. one chart. Ejecting pages like this makes for neater printing, but it can waste a lot of paper.

f) SHOW NAMES ONLY. The default is NO. This affects what information is included in the free-form charts. If it is set to NO, both names and data are included in a chart. If it is set to YES, only names are printed, but the alternate parent can be included in descendants charts (the one not on the direct lineage) as controlled by the OMIT ALTERNATE PARENT parameter. You probably like to see all the data as you are working with it, which is the rationale for having this set to NO. It makes for very long charts in general, and you will probably find the names-only version easier to read.

g) SUPPRESS NOTES ON CHARTS. The default is NO, meaning that notes will normally appear if you have chosen all data (not names only) for the free-form charts and have included notes as part of your field order selection in the MANAGER. The notes referred to are your entries in the NOTE fields in your records. If you have

chosen to use notes as reminders to yourself or as indications of progress, you may not want such "clutter" to appear in finished charts you publish or send to your relations.

h) FIRST SHEET NUMBER. The default is sheet number 1. Sheet numbers will appear on the free-form charts at the right on the top of each sheet starting with the second sheet. This occurs only when you have asked that the chart be broken at the page boundary, rather than running continuously, as controlled by the LINES PER PAGE parameter. Since the sheet number isn't printed on the first sheet, the first number actually printed will be 1 larger than the parameter is set. You might change this if you are making many charts to include in a book.

i) PRINT SIZE. The default is 16.5 characters/inch. A common set of print sizes is:

16.5	char/inch	(smallest)
12	char/inch	
10	char/inch	
8	char/inch	(largest)

Since there are so many different printers available, your printer may use a different set. The smallest size is usually preferred because it packs the most information on the page. You might like to use a larger print size for legibility or if you are restricting the number of generations. You don't have to worry about giving the precise value -- pick a number in the above range, like 11.5 char/inch, and FREEFORMS will use the size closest to that. If your printer doesn't have controlled character sizes, this parameter has no effect.

j) SHOW EMPTY FIELDS. The default is NO. When this is set to NO, FREEFORMS includes only those fields that are not empty. When a field is empty, no line or space for that field appears. On the other hand, when this parameter is set to YES, a place for every field from your field order definition can be seen. This gives you a means of verifying how complete your information is. Actually, "all fields" should be somewhat qualified, i.e. if you have entered 0, 1 or 2 for number of marriages, only that many will show rather than the nominal maximum of 7. Furthermore, some fields appear on the same line on a chart and the decision to include or omit the entire line is based on the content of all the fields, not just one. For example, if you have connected fields for Date of Burial and Place of Burial, these will print on one line; with this parameter set to NO, both the date and place would have to be empty before the line was omitted from a chart.

k) USE LAST NAME FIRST. This affects whether every name is shown as "TOPHILEES, MEFIS G." or "MEFIS G. TOPHILEES". The first type appears when this parameter is set to YES, and the second type when it is set to NO. The default is NO. This should be somewhat qualified. If you enter full name rather than a number in one of your name fields (see 4.3.6), it will be shown or printed exactly as you saved it, and is not affected by this parameter.

l) SELECTIVELY SUPPRESS NOTES. This one is normally set to NO. When it is set to NO it has no effect on whether notes are printed or not. When it is set to YES, the NUMBER OF NOTES field is checked to see if there is a Note Selector present (see section 4.3.5.6). If the Note Selector is present, only the fields you selected are printed. If the Note Selector is missing, all notes are printed (if there are any). This parameter may become overridden by your selection for SUPPRESS NOTES ON CHARTS, i.e. if full suppression of notes is requested, no notes are printed regardless of the Note Selector. If a note is not printed because of the Note Selector, any footnote references in the other fields are also omitted. If you haven't included notes as part of your field order definition, this parameter will have no effect.

m) SHOW MARRIED NAME. This is normally NO, meaning that a woman's maiden name is used instead of her married name. If it is set to YES, the married name is used. This parameter does not affect names stored directly instead of a number (see 4.3.6). If the USE LAST NAME FIRST parameter is set to YES, the first name shown will be the maiden name if the SHOW MARRIED NAME parameter is NO and the married name otherwise.

n) TAB BEFORE HEADER. This is the number of spaces to put in front of all header lines, whether you use the standard ones or define your own. It allows you to position the header to the right or the left in case you prefer one or the other position due to binding or ease of viewing. Its default value is 10. If you choose a value too large, you may experience wrap-around on headers you defined, i.e. the end of the line may print at the start of the next line.

o) USE CUSTOM HEADER. This is normally set to NO. When it is NO, the standard header of the type described with each chart will be printed. When it is set to YES, you will be asked a series of questions to define a chart header. The questions are as follows:

First a check is made to see if there is a header already saved from a previous series of questions. If there is, you are asked

USE PREVIOUSLY DEFINED HEADER?

Answering <Y> omits the remaining questions, and the old header will be printed again on whatever chart you're doing. If there is no old header, or if you answer the above by <N>, off we go into the other questions.

Assuming you answered <N>, you first need to specify how many blank lines to start with (zero is OK), then supply your lines of text, and end with the number of blank lines to follow. You might have a sequence like

```
HOW MANY BLANK LINES AT THE TOP?   <2>
TYPE UP TO 13 LINES  (C THROUGH N).  USE
'RETURN' TO END:
LINE C:   <Prepared by K.F. Gallina>
LINE D    <31 Aug 1982>
LINE E:   <'return'>

HOW MANY BLANK LINES TO FOLLOW?    <1>
```

After that your header will be repeated back to you, with verification requested, like

```
LINE A:
LINE B:
LINE C:   Prepared by K.F. Gallina
LINE D:   31 Aug 1982
LINE E:

IS IT O.K.?
```

If you answer <Y>, the header will be used (without the "LINE #" being printed, of course). If you answered <N>, you start all over again. After you answer <Y>, there is another question:

DO YOU WANT TO SET ANY PARAMETERS BEFORE STARTING (Y/N)?

This gives you the opportunity to change any of the parameters, but especially the TAB BEFORE HEADER.

You should note that if you want to show who the chart is for or the date it was printed, you must insert lines to that effect since such data is not retrieved from its places within the program.

p) LINES PER PAGE. This is a number between 0 and 66. It is normally 0. When it is 0, the parameter is ignored and the free-form charts continue from one sheet to the next with no inter-page gap, i.e. no white space. When the parameter is not 0 (typically 55), about that number of lines are printed on each page of the chart. After

approximately that number of lines is printed, the paper is moved to the top of the next sheet, the column header is printed again, and the chart continues. The reason the number of lines is approximate is that the information for one person won't be split between pages.

q) NUMERIC HEADER CODE. This affects the column headers that appear on the free-form charts. It has three recognized values: 0, 1, and -1. Its normal value is 0. When the value is 0, the English column headers (person, parents, grandparents, etc. or person, children, grandchildren, etc.) will appear if the combination of paper width and character size allows enough space; see Figures 1 through 7 for examples. If there is not enough space for the English column headers, then a numeric column header like in Figure 8 will appear. If the chart runs to multiple pages and the LINES PER PAGE parameter isn't zero, the same column header will appear on every page.

When the value is -1, the numeric column header like in Figure 8 will appear, regardless of how much or how little space is available. Again, if the chart runs to several pages and you have set the LINES PER PAGE parameter to something bigger than zero, the same column header (numeric) will appear on every page.

When the NUMERIC HEADER CODE value is 1, you get a combination of the effects of the other two values. The first column header to appear will be determined as if the parameter were zero (i.e. English or numeric, depending on the space available). Further column headers appear only if the LINES PER PAGE parameters is bigger than zero but they will all be numeric.

r) SIZE OF LEFT MARGIN. This is the number of spaces used for the left margin, and is normally 10. The actual size of the margin in inches depends on the default print size setting that you selected. You may set this to zero if you want no margin. If you set it quite large, you may cause each line to be continued on the next due to insufficient space.

s) OMIT ALTERNATE PARENT. This parameter applies only to the descendants charts, and has a default of NO. When it is set to NO, the alternate parent will appear in one of the two possible positions as determined by the INSERT PARENT FIRST parameter. When it is set to YES, no alternate parent information will be included, regardless of the setting of INSERT PARENT FIRST.

t) SUBSTITUTE SPECIAL ID. This is usually set to NO. This parameter won't have any effect unless you have a User Defined Field which has been designated (using the MANAGER) as containing an ID or

Identification in the genealogical sense (see section 3.5 if you don't understand what that means). The parameter is also dependent on SHOW ID WITH NAMES; if the latter is set to NO, then SUBSTITUTE SPECIAL ID will not do anything.

Let's assume the SHOW ID WITH NAMES parameter is set to YES. When SUBSTITUTE SPECIAL ID is set to NO, either the record number or "(NO RN)" will be shown after each name appearing in a chart. If it is set to YES, then your ID number would appear after each name instead; that might look like

B. B. WOLF (ID=HPBHD)

If the person has no RN, then no ID would be placed after the name unless you included it as part of the name itself.

Because the Special ID's aren't stored as part of each name, form generating will be slower than usual when this parameter is set to YES.

u) INSERT PARENT FIRST. This parameter applies only to the descendants chart and is normally set to NO. It only has an effect when the OMIT ALTERNATE PARENT parameter is set to NO. When INSERT PARENT FIRST is set to NO, the alternate spouse appears after the child's name. With it set to YES, the alternate spouse appears before all of his/her children but after the spouse on the direct line, and slightly indented. Setting this to NO will cause the INSERT SPOUSE DATA parameter to be set to NO as well.

v) INSERT SPOUSE DATA. This applies only to the descendants chart; its default is NO. When it is set to NO, only the name of the alternate spouse is included in the chart. When it is set to YES, the INSERT PARENT FIRST parameter is also automatically set to YES. When set to YES, other fields may be included for the alternate spouse depending on the settings of the SHOW NAMES ONLY, SHOW EMPTY FIELDS, and USE SHORT FORM parameters.

w) USE FULL ADDRESS. The default is NO. With it set to NO, only the information between the last and next-to-last semi-colon in an address will be included in a chart, nominally the town and state. Please see section 4.3.5.2 for what constitutes an address. With the parameter set to YES, the full entry in the DIED/LIVING AT field will be included in the chart. This will appear on one line, rather than being separated into the separate line of the address.

x) USE JOINED LINES. This affects only the pedigree chart, and is normally set to NO. It determines the style of vertical lines on the chart. With it set to NO, the vertical lines begin at the top

of the page and run for the length of the page. Setting it to YES causes the line to run between the father and mother, and no further. See examples in Figures 5 and 6. We want to thank Frederick W. Sawyer III for this idea.

y) USE SUPPLIED SURNAMES ONLY. This is normally set to NO. When it is NO, every person in the lineage will be used on the chart you requested, without any qualifications. When it is set to YES, you will be asked for a list of valid surnames, and only people having one of those surnames will be included in your chart. You might use this if you wanted a chart showing only the paternal line; it isn't restricted to just that, however.

After you set the parameter to YES and have selected the chart and starting person, you will get a screen that says "SELECTING SURNAMES" at the top. If there is a list of surnames already stored from a previous set of questions, you would be asked

```
USE CURRENT SURNAMES (Y/N/D)?
```

Answering **<Y>** accepts the list without any further questions. Using **<N>** will cause the list to be erased and the succeeding questions to appear. When you answer **<D>**, the list of surnames is displayed, and the same question asked again.

When there isn't any prior list, or if you didn't want the prior list, you might see

```
PLEASE SELECT UP TO 25 SURNAMES THAT
WILL BE VALID FOR YOUR CHART:

FIRST SURNAME? <JONES>
NEXT SURNAME? <ACORN>
NEXT SURNAME? <'return'>
```

When you press **<'return'>** to say "that's all", you would be shown your list for verification, like

```
YOUR SURNAMES ARE:
A) JONES
B) ACORN

O.K. TO CONTINUE (Y/N)?
```

If you answer **<Y>**, off it goes to start the chart. When you say **<N>**, you will see

```
CORRECT WHICH ONE (A-B/Z)?
```

where the range of letters will correspond to the number of surnames you entered. If you answer with the letter in front of one of the surnames, you will be asked to reenter it with

SURNAME B: **<Acorn>**

followed by the display of your list again. If you answer **<Z>** (for Zap), your list will be erased and you will start with the first question again.

Note that upper/lower case differences in surnames are significant. If you have some surnames stored as "ACORN" and others as "Acorn", asking for "ACORN" will get only those stored in upper case. If you want to print a lineage where there are several alternate spellings of the surname of interest, you would need to supply all of the alternate spellings.

5.5 Checking Diskettes

One of the main menu choices is CHECK DISKETTES. This causes the diskette in each drive to be read, in order that FREEFORMS may know the location and identity of each diskette. You should use this if you switch diskettes. Furthermore, the ONLY time you should switch diskettes when not told to do so is when you are at the main menu, followed by this choice. If you switch diskettes at any other time without being told, you may destroy some of your data, may place some data in the wrong record, or worst yet, destroy one of your data diskettes. Don't risk it! The only exception is that program diskettes may be swapped at any time.

As extra added protection for yourself, you should make backups of your data diskettes. You spent (will spend) many hours preparing them. Don't risk having to do that over due to a "simple" mistake or machine error. It is prudent to have at least two separate sets of backups in addition to your working set, i.e. the ones you usually use. You should update your backups at least at the end of each session, and perhaps more often if you have long sessions. (Yes, this has been said before. Yes, this is an odd place to say it again. No, it can't be overemphasized.)

5.6 Exiting FREEFORMS

Exiting FREEFORMS is almost the same as exiting EDIT. The only difference is that there is no list of names to save. The menu choices are identical. Please see section 4.7 for more information.

5.7 Miscellaneous Information on FREEFORMS

Several of the items on EDIT discussed in the miscellany section 4.8 are valid here, too. Please reread that if you need to. The ones that pertain to FREEFORMS are:

a) Any question may be answered with <'return'>
b) CTRL Z aborts any chart
c) GOTO 20000 gets you back into FREEFORMS after an error, usually.

6. DETAILED USE OF STRUCTURES

The STRUCTURES program prints pedigree charts from the data you store on diskette using the EDIT program. Since the EDIT program is central to the understanding of the data, we suggest you read about EDIT if you haven't done so already. For the most part, options for specific data won't be discussed here. In order to get started with STRUCTURES, you can boot as described in section 3 and choose STRUCTURES from the programs menu, or you can get to the programs menu after having run one of the other FAMILY ROOTS programs.

The drive with the program diskette will whirr for a while as STRUCTURES is being loaded, followed by a message like

PRESS ANY KEY WHEN YOUR DATA DISKETTE IS IN THE DRIVE

when you have at least one floppy drive in use with Family Roots. Be sure that at least one data diskette is present and also that every drive has some diskette in it. When you press a key, STRUCTURES will read every diskette to find out the location and identity of the data diskettes.

6.1 STRUCTURES Main Menu

After the diskettes are checked, the STRUCTURES main menu will appear, giving you the following choices:

A) PRINT STANDARD PEDIGREE CHARTS
B) PRINT COMPRESSED PEDIGREE CHARTS
C) PRINT BLANK STANDARD CHARTS
D) CHANGE PROGRAM PARAMETERS
E) CHECK DISKETTES
F) EXIT PROGRAM

The titles are fairly indicative of the function to be performed. The first three choices cause one or more charts of the type indicated to be printed on your printer. The program parameters that you can control mainly have to do with how things are formatted for printing. CHECK DISKETTES causes all of the drives to be reexamined, in case you switched diskettes. And, of course, EXIT ends your session with STRUCTURES. In later subsections we'll discuss the results of each of these choices in more detail, as well as the parameters available.

6.2 Accessing Records and Names

When you select either of the first two options of the main menu, you will need to tell STRUCTURES which people or record numbers you are interested in. You are given a choice of specifying a number range, a list of numbers, or parts of a name, and sometimes a list in

memory. In fact this choice works exactly the same as in EDIT, and we suggest you reread (read?) section 4.3.1 if you need to refresh yourself.

Each person you select via the access menu is the starting point for a chart; you do not have to select all the people that you want to have appearing somewhere in the chart. Thus if you choose a pedigree chart for yourself, STRUCTURES determines all the relationships and includes the appropriate people -- your mother, father, grandparents, etc.

For each name that satisfies your access selection, the name is retrieved from the diskette. If the diskette isn't available, you will be asked to load it into a particular drive. Once the name is retrieved, you will be asked a question like

```
PRINT STANDARD PEDIGREE CHART FOR
HENRIETTA TWINKLETOES WADSWORTH

OK TO CONTINUE (Y/N/D/P/C)?
```

with the specific type of chart to be printed mentioned. This gives you the opportunity to verify the selection before continuing with the chart.

Choosing **<Y>** or **<'return'>** sends you on your merry way, while **<N>** goes back to your access choices to find the next one. The 'D' means "Display" and can be used to display the chart on your screen rather than printing it. You might choose this to review the chart before printing or to show someone what STRUCTURES does without wasting a lot of paper. Please note that standard charts shown on a 40-column screen will have a lot of data truncated or omitted due to available space.

The 'P' is here to let you access the CHANGE PROGRAM PARAMETERS menu before starting, since most of these affect how the various charts are printed (see 6.4 for more details). After using **<P>** you will be returned to this same place with the above question repeated. If you want to remove yourself from a self-made trap and return to the main menu, type **<CTRL-Z>**; this might happen if you were too ambitious with your access selections.

The 'C' choice means "continue" and is like answering <Y>, but with a further consequence. If you have made several access selections, answering <Y> will cause the "OK to continue" question to be asked for the next person too. If you answer <C>, the question won't be asked any more for the current set of access choices. This gives you the means to make several charts without having to baby-sit the computer.

6.3 Printing Genealogy Charts

You can print automatically generated charts using STRUCTURES showing predecessors for each person selected as a starting point. The FREEFORMS program, described in section 5, prints additional styles of predecessor charts as well as descendants charts. Examples of the styles of charts are shown on the following pages. It should be emphasized that STRUCTURES constructs the charts based on the numbers entered in person fields using the EDIT program; if you have entered a name rather than a number in a person field, only that name will appear on a chart and no further ancestors related to that name will be found or printed.

During the printing of a chart, it will not be unusual for STRUCTURES to ask you to switch diskettes. This is because a record number on one diskette refers to a record on another. When STRUCTURES asks

```
PLEASE PLACE DISKETTE NUMBER 3 INTO DRIVE 2
PRESS ANY KEY WHEN READY
```

just follow the directions. The diskette number refers to the one set up by EDIT, which should be marked on the diskette label (if it isn't, use the WHAT utility to figure out which diskette is which). If you don't have the requested diskette or you want to abort the chart, answer **<N>** or **<CTRL-Z>**; you will be returned to the main menu.

There are a large number of program parameters available to give you a variety of ways to vary your charts. Most of them apply to both styles of charts, the standard and compressed. The exceptions are the

```
USE OVERLAY FORMAT
CASCADE STANDARD CHARTS
NUMBER STANDARD CHARTS
OMIT WIFE'S MARRIAGE
ASK WHICH MARRIAGE
```

parameters, which apply only to the standard charts; and the

```
USE LINE BETWEEN GENERATIONS
FIRST LINE NUMBER
```

parameters, which applies only to the compressed charts. Details on all the parameters may be found in section 6.4.

We'll look at each of the styles of charts in the following discussion, describing how to read them and showing you some of the interesting variations possible using the parameters.

6.3.1 Printing Standard Charts

A standard pedigree (i.e. predecessor) chart starts at the left margin with the person you selected (one chart per person selected) and shows the ancestors of the person progressing toward the right. Samples are shown in Figures 9 through 12.

The Standard chart is probably quite familiar to you, as it is often used by genealogists. The chart is printed on a single sheet of paper and includes a person, parents, grandparents, and great-grandparents.

The name, plus Birth, Marriage, and Death information is included for each of those people. An optional fifth generation is also available, but only the name is printed for that generation. That's due to space constraints. Figures 9 and 10 are examples of 4 generation charts, and Figures 11 and 12 show 5 generations.

The other primary difference in format comes from "overlaying", as controlled by the USE OVERLAY FORMAT parameter. With it set to NO, the format would be as seen in Figures 9 and 11, where each generation occupies its own separate vertical band or tier of the chart. With it set to YES, the person selected and his/her parents appear in the same vertical band at the left, i.e. the parents "overlay" the child. That can be seen in Figures 10 and 12.

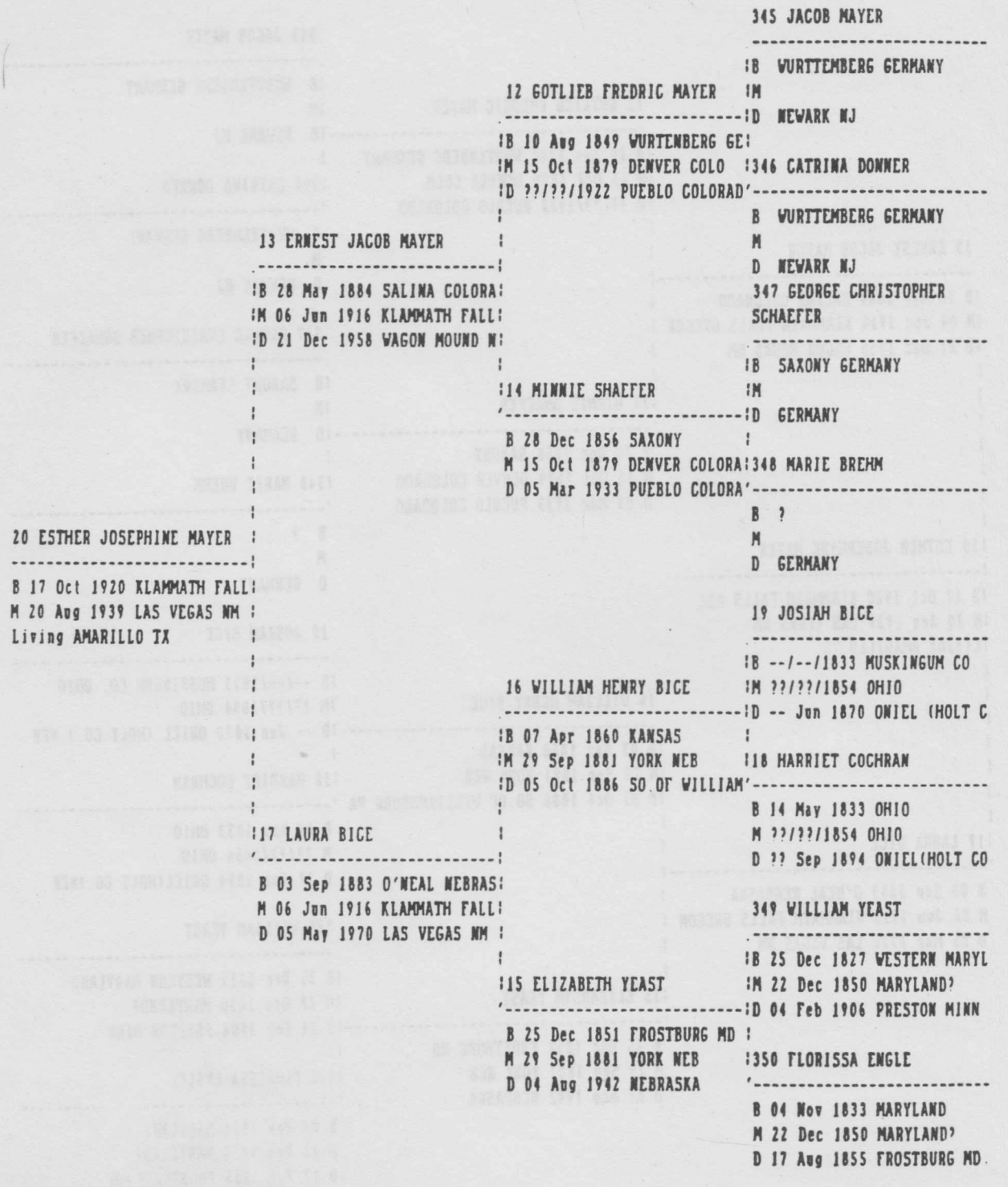
If you asked for record numbers to be printed with the names, they appear in front of each name. The birth, marriage and death (if applicable) dates are printed. The corresponding 'places' are also printed if there is enough space on the line for something intelligible, i.e. truncation may occur but at least 12 characters will be printed for each place. In the case of multiple marriages, the marriage information shown is only the one pertinent to the spouse that appears in the chart. If one or more of the relatives aren't available in your FAMILY file (as generated by EDIT), that space in the chart will be left blank. However, the dashed line and the

B
M
D

do appear. This makes the chart easy to read, and it is convenient to fill in the chart in longhand if you carry it with you in your familial searches. Note that if the person is living, the "D" is replaced by "Living" along with any data you may have stored about that.

The standard header for a standard chart consists of the words "CHART NO." positioned to the right or left according to the TAB BEFORE HEADER

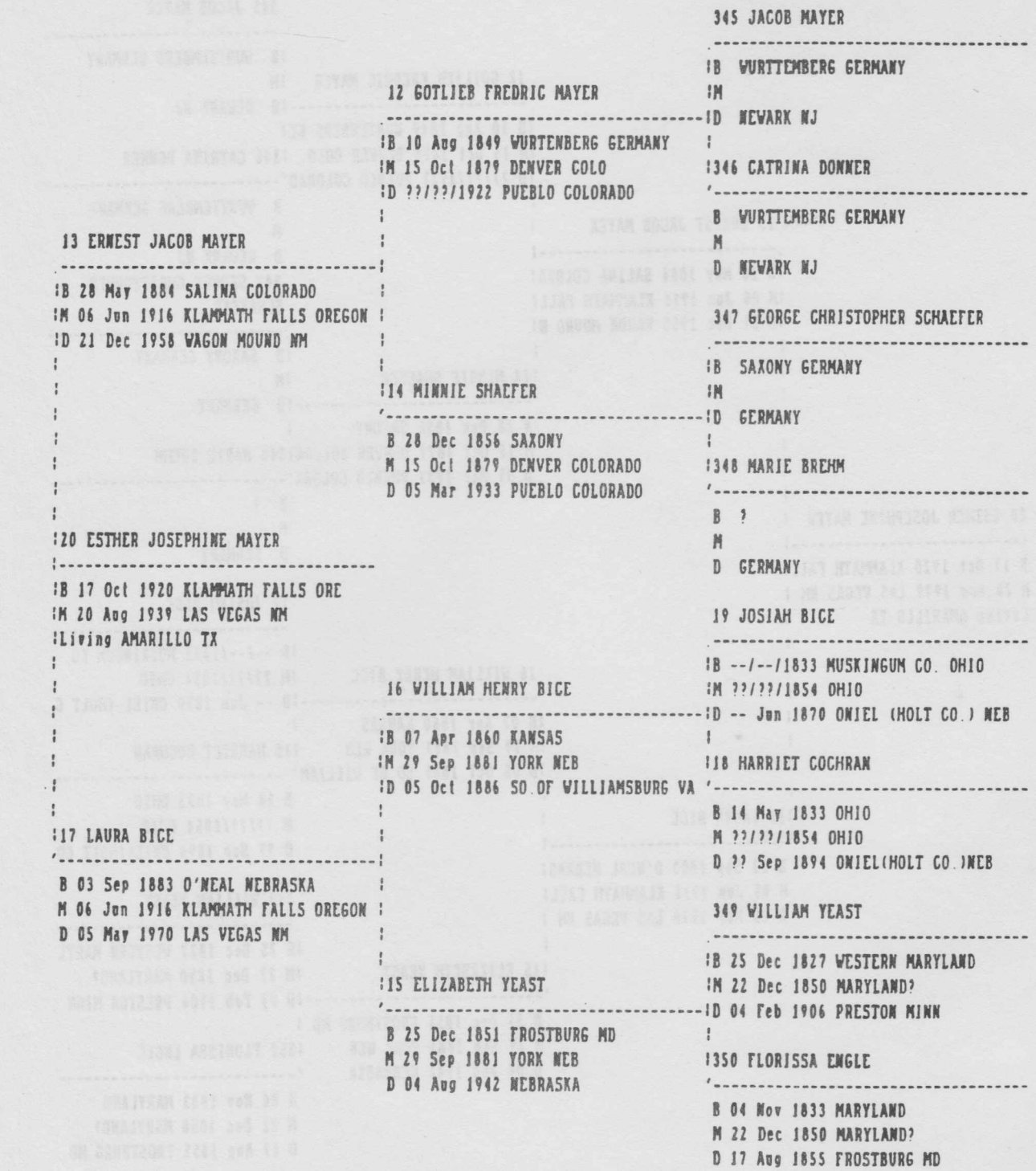
CHART NO.



STANDARD CHART, 4 GENERATIONS, NO OVERLAY

FIGURE 9.

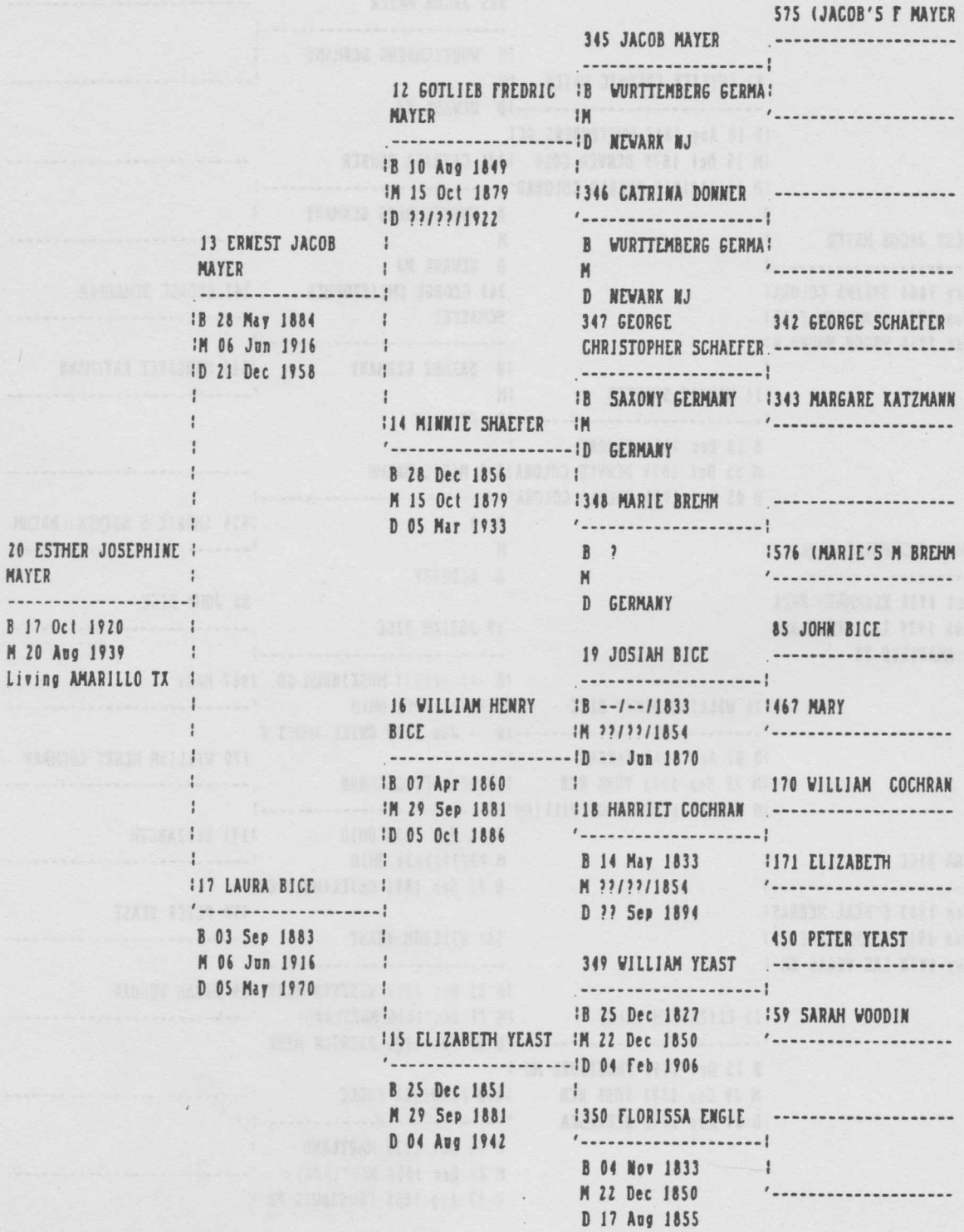
CHART NO.



STANDARD CHART, 4 GENERATIONS, OVERLAY

FIGURE 10.

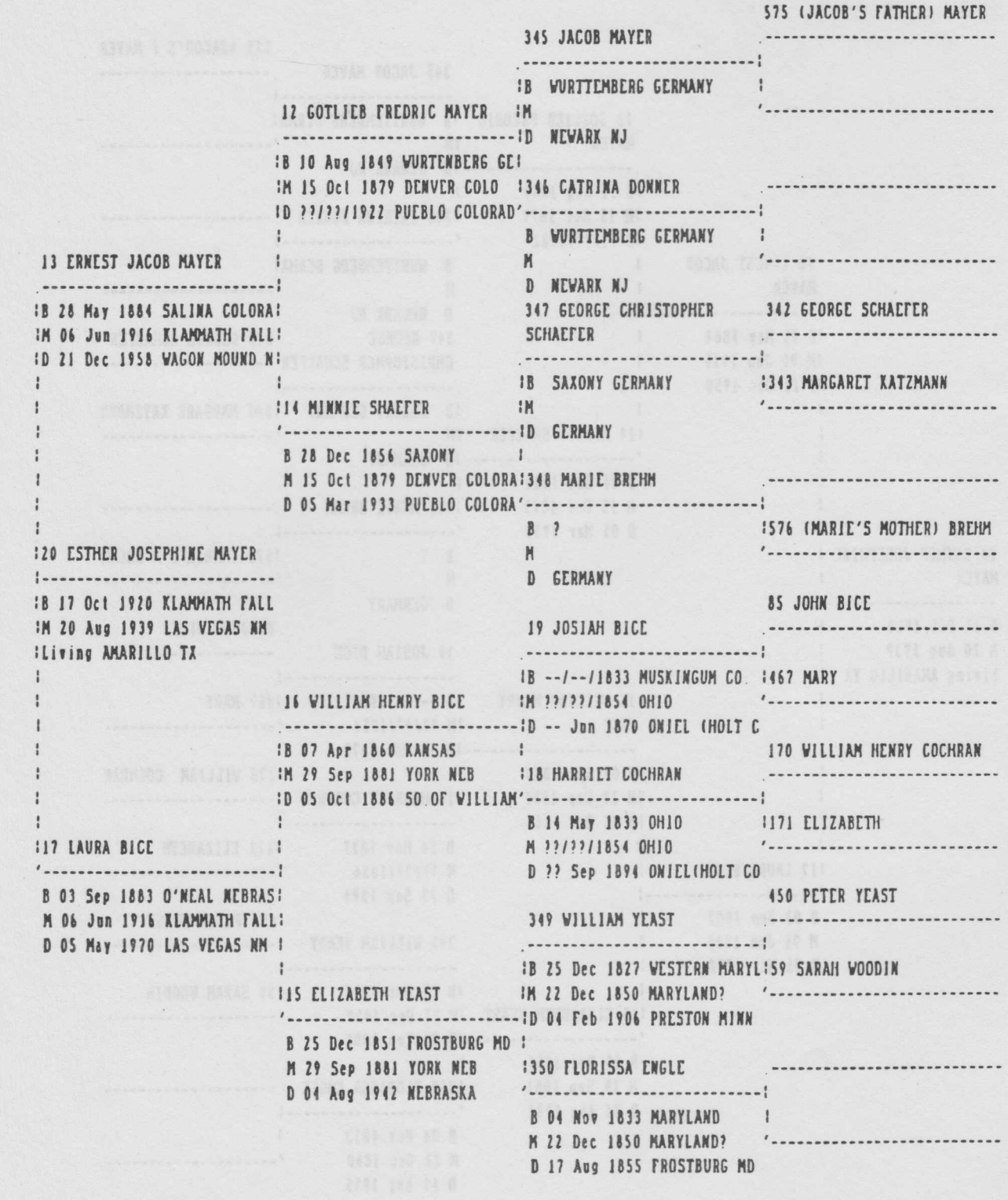
CHART NO



STANDARD CHART, 5 GENERATIONS, NO OVERLAY

FIGURE 11.

CHART NO.



STANDARD CHART, 5 GENERATIONS, OVERALY

FIGURE 12.

parameter. This allows you to assign a number to each chart, providing a means of interconnecting them. One simple automatic numbering scheme is available, or you may write your own numbers in by hand. The automatic scheme assigns a number the same as the value of the FIRST SHEET NUMBER parameter when you set the NUMBER STANDARD CHARTS parameter to YES. You can define your own header which will appear instead of the standard one by setting the USE CUSTOM HEADER parameter.

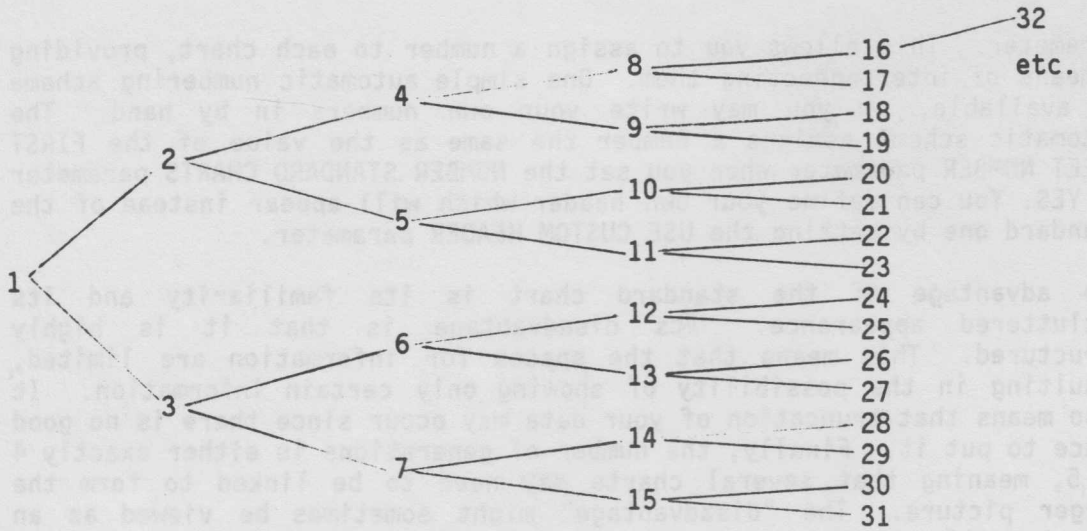
The advantage of the standard chart is its familiarity and its uncluttered appearance. Its disadvantage is that it is highly structured. This means that the spaces for information are limited, resulting in the possibility of showing only certain information. It also means that truncation of your data may occur since there is no good place to put it. Finally, the number of generations is either exactly 4 or 5, meaning that several charts may need to be linked to form the larger picture. The "disadvantage" might sometimes be viewed as an advantage if your objective is to bind the charts in book form, since in this case there is no "continuation" or "overlap" problem.

When more information is available than will fit on one standard chart, several such charts can be printed automatically using the CASCADE STANDARD CHARTS parameter. The "extra" charts are the continuation of the one you selected. For example if there is at least one parent indicated in the great-grandparents position, a chart will also be produced for that person. Furthermore, if parents are found for the great-grandparents in constructing the extra chart, more charts will be composed. This goes on until all of your data of this type is exhausted, or until the memory in STRUCTURES allocated to this is used up. The latter depends on quite a few factors but could occur for charts containing the ninth generation. No message appears -- the chart just isn't printed.

6.3.2 Printing a Compressed Pedigree Chart

The compressed pedigree chart is almost not a chart at all. It represents an attempt to squeeze as much information as possible into as little space as possible. As you can see in Figures 13 and 14, each line contains information for one person, and the people are listed one right after the other. The traditional name for this chart is the Ahnentafel.

The number at the start of each line indicates the relationship according to the German chart numbering system. The first number is always 1, the father is 2, the mother is 3, and all succeeding relationships have the father of the later generation as twice the number, with that person's wife being found by adding 1. That seems a little difficult to describe accurately. If you look at it in tree fashion, it's probably clearer:



The sample in Figure 13 doesn't include any obvious indication as to where each generation starts. A line showing the start of each generation can be inserted by setting the USE LINE BETWEEN GENERATIONS parameter to YES, which results in a chart like that shown in Figure 14. The line provides better readability, but its omission gives the greatest compression.

Included in each line is the birth, marriage and death information pertinent to the pedigree of the person chosen. In particular, only the marriage that produced the parents or grandparents, etc. is shown. The type of data is indicated by a one to three character mnemonic (easily recognizable) preceding the information; the following ones are used:

b	born, date and place
liv	living, place
d	died, date and place
bur	buried, date and place

The compressed chart can run to more than one page. Its length is determined by how much information you have stored and by how many generations you asked for with the MAXIMUM GENERATIONS parameter. Any number of generations can be printed, but asking for a large number of generations will take a very long time to make and will cause a great deal of use of your disk drives. You can reduce the amount of disk drive use by setting the MAXIMUM NUMBER LIST SIZE parameter in the MANAGER as large as possible. You should not leave this parameter permanently on a large setting because you will cause detrimental effects to the performance of the other Family Roots programs in doing that (this means slowdowns, pauses, and perhaps "out of memory" errors).

CHART OF ESTHER JOSEPHINE MAYER (RN=20), 3411 SUNLITE;AMARILLO TX;806-355-8489

---

1. ESTHER JOSEPHINE MAYER (RN=20) b 17 Oct 1920, KLAMMATH FALLS ORE, liv AMARILLO TX, m
2. ERNEST JACOB MAYER (RN=13) b 28 May 1884, SALINA COLORADO, d 21 Dec 1958 WAGON MOUND NM, m 06 Jun 1916, KLAMMATH FALLS OREGON.
3. LAURA BICE (RN=17) b 03 Sep 1883, O'NEAL NEBRASKA, d 05 May 1970, LAS VEGAS NM, m 06 Jun 1916, KLAMMATH FALLS OREGON.
4. GOTLIEB FREDRIC MAYER (RN=12) b 10 Aug 1849, WURTENBERG GERMANY, d ??/??/1922, PUEBLO COLORADO, m 15 Oct 1879, DENVER COLO.
5. MINNIE SHAEFER (RN=14) b 28 Dec 1856, SAXONY, d 05 Mar 1933, PUEBLO COLORADO, m 15 Oct 1879, DENVER COLORADO.
6. WILLIAM HENRY BICE (RN=16) b 07 Apr 1860, KANSAS, d 05 Oct 1886, SO.OF WILLIAMSBURG VA, m 29 Sep 1881, YORK NEB.
7. ELIZABETH YEAST (RN=15) b 25 Dec 1851, FROSTBURG MD, d 04 Aug 1942, NEBRASKA, m 29 Sep 1881, YORK NEB.
8. JACOB MAYER (RN=345) b WURTTEMBERG GERMANY, d NEWARK NJ, m .
9. CATRINA DONNER (RN=346) b WURTTEMBERG GERMANY, d NEWARK NJ, m .
10. GEORGE CHRISTOPHER SCHAEFER (RN=347) b SAXONY GERMANY, d GERMANY, m .
11. MARIE BREHM (RN=348) b ?, d GERMANY, m .
12. JOSIAH BICE (RN=19) b --/--/1833, MUSKINGUM CO. OHIO, d -- Jun 1870, ONIEL (HOLT CO.) NEB, m ??/??/1854, OHIO.
13. HARRIET COCHRAN (RN=18) b 14 May 1833, OHIO, d ?? Sep 1894, ONIEL(HOLT CO.)NEB, m ??/??/1854, OHIO.
14. WILLIAM YEAST (RN=349) b 25 Dec 1827, WESTERN MARYLAND, d 04 Feb 1906, PRESTON MINN, m 22 Dec 1850, MARYLAND?.
15. FLORISSA ENGLE (RN=350) b 04 Nov 1833, MARYLAND, d 17 Aug 1855, FROSTBURG MD, m 22 Dec 1850, MARYLAND?.
16. (JACOB'S FATHER) MAYER (RN=575).
20. GEORGE SCHAEFER (RN=342) b ?, d GERMANY, m .
21. MARGARET KATZMANN (RN=343) b SAXONY GERMANY, d GERMANY, m .
23. (MARIE'S MOTHER) BREHM (RN=576) b SAXONY GERMANY, m .
24. JOHN BICE (RN=85) b ??/??/180?, OHIO OR PA, d MUSKINGUM CO. OHIO?, m ??/??/183?.
25. MARY (RN=467) b ??/??/180?, m ??/??/183?.
26. WILLIAM HENRY COCHRAN (RN=170) b 04 Aug 1812, ?, d ??/??/1840, ?, m .
27. ELIZABETH (RN=171) b 25 Dec 1811, ?, d ?, m .
28. PETER YEAST (RN=450) b ?? Nov 1808, GRANTSVILLE MD, d 15 Jun 1851, GRANTSVILLE MD, m 1829.
29. SARAH WOODIN (RN=59) b MARYLAND?, d ??/??/1870, m 1829.
48. MR. BICE (RN=471) b ??/??/178?, CUMBERLAND CO PA.
56. ADAM YEAST SR. (RN=449) b AFTER 1770?, FREDERICK CO. MD., d ?, GRANTSVILLE MD., m FREDERICK CO. MD..
57. CATHERINE (RN=568) d ?, GRANTSVILLE MD?, m FREDERICK CO. MD..
58. WILLIAM WOODIN (WOOTTEN?) (RN=579) d ?, m .
96. SAMUEL BICE (RN=472) b ??/??/175?.
112. LEONARD YEAST (RN=574) b FREDERICK CO. MD., d ?, m .
113. ELIZABETH (WIFE-LEONARD) (RN=569) d ?, m .

COMPRESSED PEDIGREE CHART, NO LINE

FIGURE 13

CHART OF ESTHER JOSEPHINE MAYER (RN=20), 3411 SUNLITE;AMARILLO TX;806-355-8489

1. ESTHER JOSEPHINE MAYER (RN=20) b 17 Oct 1920, KLAMMATH FALLS ORE, liv AMARILLO TX, m

----------GENERATION 1----------

2. ERNEST JACOB MAYER (RN=13) b 28 May 1884, SALINA COLORADO, d 21 Dec 1958 WAGON MOUND NM, m 06 Jun 1916, KLAMMATH FALLS OREGON.
3. LAURA BICE (RN=17) b 03 Sep 1883, O'NEAL NEBRASKA, d 05 May 1970, LAS VEGAS NM, m 06 Jun 1916, KLAMMATH FALLS OREGON.

----------GENERATION 2----------

4. GOTLIEB FREDRIC MAYER (RN=12) b 10 Aug 1849, WURTENBERG GERMANY, d ??/??/1922, PUEBLO COLORADO, m 15 Oct 1879, DENVER COLO.
5. MINNIE SHAEFER (RN=14) b 28 Dec 1856, SAXONY, d 05 Mar 1933, PUEBLO COLORADO, m 15 Oct 1879, DENVER COLORADO.
6. WILLIAM HENRY BICE (RN=16) b 07 Apr 1860, KANSAS, d 05 Oct 1886, SO.OF WILLIAMSBURG VA, m 29 Sep 1881, YORK NEB.
7. ELIZABETH YEAST (RN=15) b 25 Dec 1851, FROSTBURG MD, d 04 Aug 1942, NEBRASKA, m 29 Sep 1881, YORK NEB.

----------GENERATION 3----------

8. JACOB MAYER (RN=345) b WURTTEMBERG GERMANY, d NEWARK NJ, m .
9. CATRINA DONNER (RN=346) b WURTTEMBERG GERMANY, d NEWARK NJ, m .
10. GEORGE CHRISTOPHER SCHAEFER (RN=347) b SAXONY GERMANY, d GERMANY, m .
11. MARIE BREHM (RN=348) b ?, d GERMANY, m .
12. JOSIAH BICE (RN=19) b --/--/1833, MUSKINGUM CO. OHIO, d -- Jun 1870, ONIEL (HOLT CO.) NEB, m ??/??/1854, OHIO.
13. HARRIET COCHRAN (RN=18) b 14 May 1833, OHIO, d ?? Sep 1894, ONIEL(HOLT CO.)NEB, m ??/??/1854, OHIO.
14. WILLIAM YEAST (RN=349) b 25 Dec 1827, WESTERN MARYLAND, d 04 Feb 1906, PRESTON MINN, m 22 Dec 1850, MARYLAND?.
15. FLORISSA ENGLE (RN=350) b 04 Nov 1833, MARYLAND, d 17 Aug 1855, FROSTBURG MD, m 22 Dec 1850, MARYLAND?.

----------GENERATION 4----------

16. (JACOB'S FATHER) MAYER (RN=575).
20. GEORGE SCHAEFER (RN=342) b ?, d GERMANY, m .
21. MARGARET KATZMANN (RN=343) b SAXONY GERMANY, d GERMANY, m .
23. (MARIE'S MOTHER) BREHM (RN=576) b SAXONY GERMANY, m .
24. JOHN BICE (RN=85) b ??/??/180?, OHIO OR PA, d MUSKINGUM CO. OHIO?, m ??/??/183?.
25. MARY (RN=467) b ??/??/180?, m ??/??/183?.
26. WILLIAM HENRY COCHRAN (RN=170) b 04 Aug 1812, ?, d ??/??/1840, ?, m .
27. ELIZABETH (RN=171) b 25 Dec 1811, ?, d ?, m .
28. PETER YEAST (RN=450) b ?? Nov 1808, GRANTSVILLE MD, d 15 Jun 1851, GRANTSVILLE MD, m 1829.
29. SARAH WOODIN (RN=59) b MARYLAND?, d ??/??/1870, m 1829.

----------GENERATION 5----------

48. MR. BICE (RN=471) b ??/??/178?, CUMBERLAND CO PA.
56. ADAM YEAST SR. (RN=449) b AFTER 1770?, FREDERICK CO. MD., d ?, GRANTSVILLE MD., m FREDERICK CO. MD..
57. CATHERINE (RN=568) d ?, GRANTSVILLE MD?, m FREDERICK CO. MD..
58. WILLIAM WOODIN (WOOTTEN?) (RN=579) d ?, m .

----------GENERATION 6----------

96. SAMUEL BICE (RN=472) b ??/??/175?.
112. LEONARD YEAST (RN=574) b FREDERICK CO. MD., d ?, m .
113. ELIZABETH (WIFE-LEONARD) (RN=569) d ?, m .

COMPRESSED PEDIGREE CHART WITH LINES
FIGURE 14

If one of the parents of a person isn't available in the person's record, the line for the parent in the chart will be omitted. If you examine the example chart in Figure 13, you will see that all line numbers between 1 and 63 don't appear. The cause is missing relatives.

The standard header for the compressed chart highlights the person's name and separates it from the body of the chart with a line, to avoid confusion between the header and the first entry in the chart. You can, of course, define your own header as for the other charts as controlled by the USE CUSTOM HEADER parameter.

6.3.3 Printing Blank Standard Charts

When you select <C> from the STRUCTURES first menu, you can print one or more copies of a blank standard chart in the style defined by your parameter settings. A blank chart is one with no names or data on it. You are only asked one question before the printing starts, namely,

HOW MANY COPIES?

If you press <'return'>, one copy will be assumed. Otherwise, the number of copies you specify will be printed.

The following parameters affect your blank chart:

MAXIMUM GENERATIONS
TOP-OF-FORM AFTER PRINTS
FIRST SHEET NUMBER
USE OVERLAY FORMAT
PRINT SIZE
NUMBER STANDARD CHARTS
OMIT WIFE'S MARRIAGE
TAB BEFORE HEADER
USE CUSTOM HEADER
SIZE OF LEFT MARGIN

Please see figures 9 through 12 for examples of the main variations possible. The "B,M,D" or "B,D" depending on the OMIT WIFE'S MARRIAGE parameter, will be printed for the first four generations on the chart.

If you set the NUMBER STANDARD CHARTS to YES and the FIRST SHEET NUMBER to something bigger than zero, your successive blank charts will be sequentially numbered at the top after the "CHART NO." header. No pointers will be placed at the ends of the lines at the right, however.

6.4 Changing Program Parameters

There are twenty-two parameters used by STRUCTURES that affect the way things are displayed or printed. A value is normally assumed for each of these parameters (called a default) so you don't have to worry about setting all of them when you're just starting. (You can change the starting values using the MANAGER.) There is a menu and procedure to change the values, accessed by pressing <C> from the main menu or by pressing <P> from the access menu or in response to the question asking for verification of the name (see 6.3).

The menu shows a brief title for each parameter and its current value, followed by the question

WHICH (A-V)?

meaning "which letter". When you choose a letter, STRUCTURES asks you what you want the value to be. If you press <'return'> in response to the WHICH? question, you'll be returned to where you came from.

The following paragraphs discuss each parameter:

a) FIRST VISIBLE PARAMETER. This parameter's value is a letter between B and V. It affects how the CHANGE PROGRAM PARAMETERS menu (the one you're looking at now) appears. The reason for this parameter is that there are more program parameters than there are lines on the screen to show them. You can see a different selection of them by resetting this parameter. The starting value is always B, which means you can see parameters B through N on the screen in addition to A (always present). As an example, if you set this to M, you will see parameter A plus M through V on the screen. The default value of the 'First Visible Parameter' isn't available for resetting via the MANAGER. Don't worry about pressing an illegal letter on this--STRUCTURES won't change anything if you do.

b) USE MONTH NAMES. This is a YES/NO parameter. It is normally set to YES. When it is set to YES, the three character abbreviation for the month is used in printing all dates where this is possible. An example date of this type is 13 Jun 1926. If it is set to NO, or false, the date is printed with all numbers using the familiar slashed format. In this case the order of the day and month depends on the value you selected for DAY/MONTH ORDER in the the MANAGER program. An example of this format would be 25/06/1922 in the order day-month, and 06/25/1922 in the order month-day. The standard order for genealogists is day-month. Imprecise dates such as About 1850 are printed exactly as stored, and are not affected by this parameter.

c) MAXIMUM GENERATIONS. This is what is sounds like, but has different results for the Standard and Compressed charts. Its default is 5, the nominal maximum is 10 and the minimum is 1. The nominal maximum can be reset using the MANAGER.

For the Standard chart, setting the parameter to 3 or less will result in 3 generations in addition to the person selected, i.e. 4 generations total. Setting it to 4 or more will result in 4 generations beyond the person selected, i.e. 5 generations total. For example, setting it to 7 generations still only gets you one chart with 5 generations including the selected person.

For the Compressed chart, setting the parameter causes that number of generations to be included in the chart. Please refer to section 6.3.2 for the cautions on disk drive use and timing for large settings of the parameter.

d) SHOW ID WITH NAMES. The default is YES. This causes the person's RN or ID number to appear with any name that is output. The choice of RN vs. ID is governed by the SUBSTITUTE SPECIAL ID parameter. The number is printed after the name in the Compressed charts and in front of the name in the Standard one. Showing an RN or ID with a name sometimes helps resolve ambiguity in cases where you have people with identical names. You may want to set this to NO before printing charts for sending to your relatives.

e) TOP-OF-FORM AFTER PRINTS. The default is YES. This applies only to the printer. This causes the printer to move the paper to the top of the next sheet whenever it finishes one printing task, i.e. one chart. Ejecting pages like this makes for neater printing, but it can waste a lot of paper.

f) FIRST SHEET NUMBER. The default is sheet number 1. Sheet numbers will appear on the Compressed charts at the right on the top of each sheet starting at the second sheet. This occurs only when you have asked that the chart be broken at the page boundary, rather than running continuously, as controlled by the LINES PER PAGE parameter. Since the sheet number isn't printed on the first sheet, the first number actually printed will be 1 larger than the parameter is set. You might change this if you are making many charts to include in a book.

The sheet number will appear on the Standard charts after the CHART NO. standard header only if the NUMBER STANDARD CHARTS parameter is set to YES. The first chart from your access selection is printed with this number, and each succeeding choice from the same access is increased by 1. When you revert to the main menu and make another access selection, you start again at this parameter value.

When the cascade is being used, the charts will be numbered sequentially, starting at the value of the FIRST SHEET NUMBER parameter. For example, if you generated 3 charts while doing a cascade, and wanted the first one to be chart 6, they would be numbered 6, 7, and 8. Please see the description of the NUMBER STANDARD CHARTS parameter for more information.

g) USE OVERLAY FORMAT. This applies only to the Standard charts, and has a default of YES. When set to YES, the person selected and his/her parents are printed in the same vertical band of the chart. When set to NO, the person selected is printed in a separate vertical band. Please see Figures 9 and 10 for examples. Using the overlay format gives more space on each line and will generally cause less truncation of your data.

h) CASCADE STANDARD CHARTS. The default is NO. This affects only the standard charts. When it is set to NO, only one chart is printed per name selected. When it is set to YES, STRUCTURES will try to extend the number of generations shown for the selected person by printing charts that can be linked together. The usual way that you use this might be either of the values, but we had to pick one to start out with. If you don't like it, please change it using the MANAGER.

i) PRINT SIZE. The default is 16.5 characters/inch. A common set of print sizes is:

16.5	char/inch	(smallest)
12	char/inch	
10	char/inch	
8	char/inch	(largest)

Since there are so many different printers available, your printer may use a different set. The smallest size is usually preferred because it packs the most information on the page. You might like to use a larger print size for legibility or if you are restricting the number of generations. You don't have to worry about giving the precise value -- pick a number in the above range, like 11.5 char/inch, and STRUCTURES will use the size closest to that. If your printer doesn't have controlled character sizes, this parameter has no effect.

j) NUMBER STANDARD CHARTS. As the name implies, this parameter applies only to the Standard charts, and is usually set to NO. There are many numbering methods in use for genealogical charts, and we couldn't hope to support them all. If you don't want to use our simple method, you would have this set to NO, and would number your charts by hand.

When the parameter is set to YES, the value of the FIRST SHEET NUMBER parameter is placed after the CHART NO. standard header on the first chart. If the CASCADE STANDARD CHARTS parameter is set to NO, that number is incremented by 1 for each new chart from the same access selection. Without the cascade, there are no "pointers" to other charts placed at the right side of each chart.

When the CASCADE STANDARD CHARTS is set to YES along with this parameter, the charts will be numbered sequentially starting at the value of the FIRST SHEET NUMBER parameter. The number will appear after the CHART NO. standard header. At the right of each chart, a pointer will be added wherever additional charts are to be made, showing the chart number to refer to. The pointer is shown on the line underneath the name and would look like

```
---------->5
```

to refer you to chart 5. Where there are no further charts, no pointer would be printed.

k) USE LAST NAME FIRST. This affects whether every name is shown as "TOPHILEES, MEFIS G." or "MEFIS G. TOPHILEES". The first type appears when this parameter is set to YES, and the second type when it is NO. The default is NO. This should be somewhat qualified. If you enter full name rather than a number in one of your name fields (see 4.3.6), it will be shown or printed exactly as you saved it, and is not affected by this parameter.

l) OMIT WIFE'S MARRIAGE. This applies only to the Standard charts, and has a default of YES. The wife's marriage information on the chart should be identical to the husband's. Including it would therefore duplicate information already shown on the chart. With the parameter set to YES, the wife's marriage data is not shown. With it set to NO, the redundant line is included.

m) SHOW MARRIED NAME. This is normally NO, meaning that a woman's maiden name is used instead of her married name. If it is set to YES, the married name is used. This parameter does not affect names stored directly instead of a number (see 4.3.6). If the USE LAST NAME FIRST parameter is set to YES, the first name shown will be the maiden name if the SHOW MARRIED NAME parameter is NO and the married name otherwise.

n) TAB BEFORE HEADER. This is the number of spaces to put in front of all header lines, whether you use the standard ones or define your own. It allows you to position the header to the right or the left in case you prefer one or the other position due to binding or ease of viewing. Its default value is 10. If you choose a value too

large, you may experience wrap-around on headers you defined, i.e. the end of the line may print at the start of the next line.

o) USE CUSTOM HEADER. This is normally set to NO. When it is NO, the standard header of the type described with each chart will be printed. When it is set to YES, you will be asked a series of questions to define a chart header. The questions are the same as described in Section 5.4, item o); please see that for further information.

p) LINES PER PAGE. This is a number between 0 and 66. It affects only the Compressed charts and is normally set to 55. After approximately that number of lines is printed, the paper is moved to the top of the next sheet and the chart continues. The reason the number of lines is approximate is the the information for one person won't be split between pages. You may have the chart run continuously without a page break by setting the parameter to 0 (zero). Standard charts are printed one per page and aren't split between pages.

q) USE LINES BETWEEN GENERATIONS. This applies only to the Compressed charts and is normally YES. When it is set to YES, a horizontal line is inserted at the start of each generation (parents, grandparents, etc.) showing the generation number. When it is set to NO, there is no line printed. The line makes the chart easier to read but makes it occupy more lines.

r) SIZE OF LEFT MARGIN. This is the number of spaces used for the left margin, and is normally 10. The actual size of the margin in inches depends on the default print size setting that you selected. You may set this to zero if you want no margin. If you set it quite large, you may cause each line to be continued on the next due to insufficient space.

s) ASK WHICH MARRIAGE. This applies only to the Standard charts and has a default of YES. It is not always possible for STRUCTURES to determine accurately which marriage information should be included for the first person on the chart (i.e. the selected person) when there are multiple marriages. When this parameter is set to YES, you will be asked to resolve any problems. When this is NO, the marriage data for the first person will be omitted if the appropriate marriage can't be determined. The parameter is supplied to enable unattended operation.

If there are less than two marriages, this parameter will have no effect--the marriage data will be included if available. If there is more than one marriage, the chart is being generated due to cascading (i.e. CASCADE STANDARD CHARTS set to YES), and the

ACCUMULATE RN's parameter is set to YES, the program will attempt to find the correct spouse in the list in memory before resorting to asking you.

t) SUBSTITUTE SPECIAL ID. This is usually set to NO. This parameter won't have any effect unless you have a User Defined Field which has been designated (using the MANAGER) as containing an ID or Identification in the genealogical sense (see section 3.5 if you don't understand what that means). The parameter is also dependent on SHOW ID WITH NAMES; if the latter is set to NO, the SUBSTITUTE SPECIAL ID will not do anything.

Let's assume the SHOW ID WITH NAMES parameter is set to YES. When SUBSTITUTE SPECIAL ID is set to NO, either the record number or "(NO RN)" will be shown after each name appearing on the Compressed chart. The record number would appear in front of the name in the Standard charts, or no number would be shown if the person has has no RN. If it is set to YES, your ID number instead of the RN would appear after each name in the Compressed chart or in front of each name in the Standard chart. If the person has no RN, then no ID would be shown with the name unless you included it as part of the name itself.

Because the Special ID's aren't stored as part of each name, generating the charts with the parameter set to YES will take more time than usual.

u) FIRST LINE NUMBER. This has a default of 1. It applies only to compressed charts. It is the number to be used for the first person on the chart (i.e. the "chart number" at the left), and affects all subsequent numbering and the generation numbers if selected. The purpose of the parameter is to allow continuation of one lineage on a chart that was previously printed. A value less than 1 is treated as 1.

v) USE FULL ADDRESS. The default is NO. With it set to NO, only the information between the last and next-to-last semi-colon in an address will be included in a chart, nominally the town and state. Please see section 4.3.5.2 for what constitutes an address. With the parameter set to YES, the full entry in the DIED/LIVING AT field will be included in the chart. This may get truncated on the Standard charts due to space limitations.

w) DATE. This parameter is initially set when you started, if you are using this feature. If you changed the date while running one of the other Main programs (except LISTS) the revised value will be preserved when you arrive in STRUCTURES.

6.5 Checking Diskettes

One of the main menu choices is CHECK DISKETTES. This causes the diskette in each drive to be read, in order that STRUCTURES may know the location and identity of each diskette. You should use this if you switch diskettes. Furthermore, the ONLY time you should switch diskettes when not told to do so is when you are at the main menu, followed by this choice. If you switch diskettes at any other time without being told, you may destroy some of your data, may place some data in the wrong record, or worst yet, destroy one of your data diskettes. Don't risk it! The only exception is that the three program diskettes (Main and Auxiliary) may be swapped at any time in the same drive.

6.6 Exiting STRUCTURES

Exiting STRUCTURES is almost the same as exiting EDIT. The only difference is that there is no list of names to save. The menu choices are identical. Please see section 4.7 for more information.

6.7 Miscellaneous Information on STRUCTURES

Several of the items on EDIT discussed in the miscellany section 4.8 are valid here, too. Please reread that if you need to. The ones that pertain to STRUCTURES are:

a) Any question may be answered with **<'return'>**
b) CTRL-Z aborts any chart
c) GOTO 20000 gets you back into STRUCTURES after an error, usually.

7. DETAILED USE OF PERSONS

The PERSONS program prints or displays the information you store for one person. If you haven't read the section on the EDIT program yet, we suggest you do so; it is important to the understanding of what you can do here. In order to get started with PERSONS, you can boot as described in section 3 and choose PERSONS from the programs menu, or you may get to the programs menu after having run one of the other FAMILY ROOTS programs.

The drive with the program diskette will whirr for a while as PERSONS is being loaded, followed by the message

PRESS ANY KEY WHEN YOUR DATA DISKETTES ARE IN THE DRIVES.

Be sure that at least one data diskette is present and that every drive has some diskette in it. When you press the key, PERSONS will read every diskette to determine the location and identity of each.

7.1 PERSONS Main Menu

After the diskettes are checked, the PERSONS main menu will appear, giving you the following choices:

A) SCREEN TRACE
B) PRINT INDIVIDUALS
C) CHANGE PROGRAM PARAMETERS
D) CHECK DISKETTES
E) EXIT PROGRAM

The first choice allows you to display an individual's record on the screen and move easily to a display of one of the parents, children, or spouses for that person. The information in individual records can be printed using the second item. The program parameters mainly affect how the data is printed or shown. Checking diskettes is how you swap diskettes under your own volition. And exit exits, oddly enough! We'll discuss each of these items in more detail after a brief section (that will seem familiar) on accessing names and records.

(If this whole section seems familiar so far, that has been more than coincidence.)

7.2 Accessing Records and Names

When you select either of the first two items on the PERSONS main menu, you then need to tell PERSONS which records or people you are interested in. You are given a choice of specifying number range, a list of

numbers, or parts of a name, and sometimes a list saved in memory. This choice works the same as in EDIT as described in section 4.3.1. We suggest you read that section again if you need a refresher.

* A display or printed form will be made for each person found using your access choices. When you have selected "print individuals", only the records selected will be printed. When you choose "screen trace", other records can be displayed after the first. For example, if you asked for a display of record numbers 15 and 84, record 15 would first be displayed. You could then display the father of record 15, any relation of the father's, and so on. When you are finished following a line of individuals, your next display would be of record 84. It is possible to print any of the records being viewed while using the screen trace without interrupting the trace.

If you find that your access choices were too ambitious, or if you want to return to the main menu for any reason, type **<CTRL-Z>**. As we have said many times before, please don't switch diskettes unless you are told to do so or unless you are at the main menu and can cause the diskettes to be checked.

7.3 Showing Individual Records

This section discusses what is shown after you have chosen to display or print individuals. The same thing is printed as is displayed except for titles, pauses, and page formatting, so this discussion mostly applies to any destination for the form.

These individual sheets are particularly useful when combined with a chart into a book. When we do this we choose a particular family line and print one of the free-form charts, either descendants or pedigree, using names only (see 5.3.1 or 5.3.2). Then for every name on the chart, or perhaps everybody with the same surname, we print individual sheets, one per page. Finally, the chart and the sheets are bound into a family book. This is a cohesive unit of information that is relatively easy to prepare after your data has been entered. We have found that relatives appreciate them as gifts for any special occasion.

When you show individual records, each record you selected is retrieved from a diskette and all the explicit and inferred information is displayed or printed. If you are displaying, there is a pause after each record with a choice requested as described in the next section. There may also be intermediate pauses which prevent the display from scrolling off the top of the screen before you've had a chance to look at it. This depends on the amount of data saved for a person. For printing there are no pauses. All records that you selected are printed in succession until the list is complete or until you terminate using CTRL-Z. You are returned to the PERSONS main menu at the end of the cycle.

If a person you selected isn't available on one of the diskettes currently in a drive, PERSONS will tell you which diskette it needs and where to place it. If that is a problem or if you don't want to do that for any reason, answer <N> or <CTRL-Z> to the instructions, and you will be returned to the PERSONS main menu.

The presentation of the information in a record is formatted to make it easy to read, and related facts are grouped. An example of a complete sheet is shown in Figure 15. The fields to be included and the order of their appearance can be defined using the MANAGER, and there are two such selections possible. Which one to show is controlled by the USE SHORT FORM parameter. Figure 16 gives an example of a "short form" sheet on the same person. Notice that some of the same information is shown, but in a different order.

Any field which has an entry made in it will always be printed if it is a part of the defined field order (see section 12.7). Empty fields can be shown as well by setting the SHOW EMPTY FIELDS parameter. Date fields are formatted depending on the value of the USE MONTH NAMES parameter when they are found to be of the standard type, or the date is shown exactly as stored otherwise. Person fields containing numbers are converted to the person's name, or are otherwise shown exactly as stored (also see below). The record number is also normally shown, but can be suppressed for a "finished" look (NO RN means the full name is stored). Notes are enclosed in parentheses with the note number and a colon preceding the text you entered. Other text fields are shown exactly as stored except for when a full address is present, as described in 4.3.5.2.

Only the number field 'NUMBER OF CHILDREN' is explicitly displayed or printed, but inferences derived from 'NUMBER OF MARRIAGES' are shown. If the latter field is blank, MARITAL STATUS: UNKNOWN is shown, and if the field contains a zero you will see MARITAL STATUS: SINGLE. In addition if the NUMBER OF CHILDREN field is blank, 'UNKNOWN' will be shown instead of a number.

If you are displaying, some of the names contained within a record may not be displayed. This occurs when the name is referenced using a number, and the diskette having that number is not currently in a drive. For this case you will see something like

```
NUMBER OF CHILDREN:  3
     1)  CORNELIUS PHILPOT (RN=362)
     2)  (RN=1776) (NAME NOT AVAILABLE)
     3)  SMOKEY PHILPOT (RN=365)
```

```
ELIZABETH YEAST (RN=15)
   (Last Updated 10 Aug 1983)

BORN: 25 Dec 1851
  AT: FROSTBURG MD
NUMBER OF MARRIAGES: 2
MARRIED TO: JOHN SHEETS (RN=158)
        ON: ?? Nov 1870
        AT: PRESTON MINN
        STATUS: Widowed
REMARRIED TO: WILLIAM HENRY BICE (RN=16)
        ON: 29 Sep 1881
        AT: YORK NEB
        STATUS: Widowed
DIED ON: 04 Aug 1942
     AT: NEBRASKA
FATHER: WILLIAM YEAST (RN=349)
MOTHER: FLORISSA ENGLE (RN=350)
NUMBER OF CHILDREN: 8
    1) ANNA FLORISSA SHEETS (RN=159)
    2) RALPH J. SHEETS (RN=160)
    3) LAURA BICE (RN=17)
    4) MARY E. (MOLLY) BICE THOMPSON (RN=135)
    5) LEWIS BICE (RN=136)
    6) WILLIAM OLIVER (WILLY) BICE (RN=137)
    7) WILLIAM SHEETS(1872-3) (NO RN)
    8) GEORGE E. SHEETS(1875-8) (NO RN)
```

INDIVIDUAL SHEET

FIGURE 15.

ELIZABETH YEAST (RN=15)

FATHER: WILLIAM YEAST (RN=349)
MOTHER: FLORISSA ENGLE (RN=350)
NUMBER OF CHILDREN: 8
1) ANNA FLORISSA SHEETS (RN=159)
2) RALPH J. SHEETS (RN=160)
3) LAURA BICE (RN=17)
4) MARY E. (MOLLY) BICE THOMPSON (RN=135)
5) LEWIS BICE (RN=136)
6) WILLIAM OLIVER (WILLY) BICE (RN=137)
7) WILLIAM SHEETS(1872-3) (NO RN)
8) GEORGE E. SHEETS(1875-8) (NO RN)

INDIVIDUAL SHEET, SHORT FORM

FIGURE 16

The reason for doing it this way is that a diskette would have to be switched to get the name, which would destroy the display in doing so because of the instructions put to the screen. All names are included if you are printing rather than displaying.

The individual sheet normally starts with the person's name. If you have the ASK FOR HEADER parameter on, you will be asked to define a header before the first sheet is printed, and that header will be printed on all the sheets in the set.

The WORDS program or your word processor may be used to save free-text passages for individuals. This might include a description of the person's life or other such pertinent facts, which you might like to have appear on the same page as the standard information stored using EDIT. One of the parameters allows you to do this. When you use it, after each individual sheet is printed you may be told

```
PLEASE PLACE A TEXT DISKETTE IN DRIVE 2
PRESS ANY KEY WHEN READY
```

The text diskette is then searched and any text is printed if found. If you change your mind or can't find the right diskette, answer with **<N>** for NO, which gives you the next name accessed, if any, or with **<CTRL Z>**, which puts you back to the main menu. Don't put back the standard data diskette until told to do so -- you may damage your data otherwise. If you want to print text for some people but not others as you work through a list, you may want to separate the lists to put all the text ones together, since all printing is done without preplanned pauses. The details on how to make text diskettes are available in section 11.

The appending of text assumes that the text information is stored in files named in a certain way. For example, it would expect text for the person with RN=86 to be in a file named RN86. If it isn't there, PERSONS won't find it for appending. Section 11 describes in detail about these expected file names. WORDS can be set to make files with these names automatically. If you are using your word processor, you will need to assign the appropriate names yourself when you expect to do appending. Note that PERSONS will print a text file of any length, even though WORDS has a limit on the total length of a file it can make. You may be successful in appending text files from some word processors only if the ACCEPT LONG LINES parameters is set to YES.

7.4 Screen Tracing

Screen tracing refers to the process of displaying (and possibly printing) a set of individual sheets, related along direct family lines.

Whenever PERSONS displays an individual sheet, you will see the following at the bottom of the screen at the end of the sheet:

<F>ATHER <M>OTHER <S>POUSE <C>HILD
<A>GAIN <O>UTPUT <P>ARAMETERS <RET>

Those are the key to tracing a family line. If you press <F>, you will see the individual sheet for the father of the sheet currently showing on the screen. Similarly, pressing another of the first four keys indicated gets one of the relatives of the person currently showing on the screen. If there is more than one spouse or child, you will be asked which one, by number.

Asking for father, mother, spouse, or child always is referenced to the sheet currently on the screen. That means, for example, that pressing <F> twice will get you the grandfather of the first sheet showing. The father's sheet will be shown before the grandfather's even if you happen to press those two F's in quick succession.

If there isn't a record for the person you select, the response will be

THAT PERSON HAS NO RN

or

NO SPOUSE HAS AN RN

or

NO CHILD HAS AN RN

and the same sheet will stay on the screen. You may make another choice at that point.

Since the length of an individual sheet can exceed the length of the screen, you might miss seeing some of it. To display the same sheet again, press <A> for "again". Pressing <P> gets you the menu of parameters; you will return to the same sheet display when you finish with that. And pressing <'return'> says you are done with this line -- the next display would be the next person you chose from the access menu, or the PERSONS main menu if there aren't any more.

If you decide you would like a printed copy of the sheet on the screen, you can make one using <O>, shown on the screen as "output". The printed form will be the complete one, not just a copy of what is on the screen. Furthermore, all of the names will be included in full, even if the screen is showing "(NAME NOT AVAILABLE)" as described in the previous section. The APPEND TEXT FILE parameter has no effect on screen displays, but if you ask for an "output" from a trace with that parameter set to YES, it will attempt to print any available text after the sheet.

Because displaying a full record can fill the screen several times and cause delays, you may want to set the USE SHORT FORM parameter to YES. The intent of this parameter is to enable use of a briefer than usual form, perhaps containing only parents or children, so that a screen trace can be followed more rapidly. If you find a record you want to print during a trace, you can set the short form to NO, print it in full, and then revert to the short form again. That, of course, is done by using the menu of parameters.

Screen tracing may also be used for printing selected individual sheets. This is especially the case when you are uncertain who you want printed but know they fall in a certain family line. You could move along a line, or back and forth searching for the person, until the desired sheets are found. Once found, out they go the printer upon your command.

7.5 Changing Program Parameters

There are nineteen parameters available in PERSONS that affect the printing and display of the individual sheets. A starting value is normally assumed for each of these, so you don't need to worry about setting them when you are just learning to use PERSONS. You can change the starting values by resetting them using the MANAGER program as described in section 12.

There is a menu and procedure for changing parameter values, accessed by selecting **<C>** from the main menu, or **<P>** from the access menu and screen trace options. The menu shows the brief titles for each of the parameters, along with its current value. To change a value, press the letter in front of the parameter name and supply the new value in response to the question asked. If you made the wrong parameter selection you may preserve the old value by pressing **<'return'>**. After each change the menu is regenerated, and you can inspect it to see that your change was properly detected. You can escape to the source of the parameter selection access by pressing **<'return'>** instead of the letter.

Since the procedures for changing parameters are the same in all the main programs, you might want to refer to the corresponding sections for other programs if you are confused or need more details, e.g. 4.5 for EDIT or 6.4 for STRUCTURES.

The following paragraphs discuss each parameter:

a) FIRST VISIBLE PARAMETER. This parameter's value is a letter between B and T. If affects how the CHANGE PROGRAM PARAMETERS menu (the one you're looking at now) appears. The reason for this parameter is that there are more program parameters than there are lines on the screen to show them. You can see a different

selection of them by resetting this parameter. The starting value is always B, which means you can see parameters B through N on the screen in addition to A (always present). As an example, if you set this to M, you will see parameter A plus M through T on the screen. The default value of the 'First Visible Parameter' isn't available for resetting via the MANAGER. Don't worry about pressing an illegal letter on this--PERSONS won't change anything if you do.

b) USE MONTH NAMES. This parameter is normally set to YES. When it is YES, the three character abbreviation for the month is used in printing all dates where this is possible. An example date of this type is 13 Jun 1926. If it is NO, the date is printed with all numbers using the familiar slashed format. In this case the order of the day and month depends on the value you selected for DAY/MONTH ORDER in the MANAGER program. An example of this format would be 25/06/1922 in the order day-month, and 06/25/1922 in the order month-day. The standard order for genealogists is day-month. Imprecise dates such as About 1850 are printed exactly as stored, and are not affected by this parameter.

c) SHOW EMPTY FIELDS. The default is NO. When this is NO, PERSONS includes only those fields that are not empty. When a field is empty, no line or space for that field appears. On the other hand, when this parameter is set to YES, a place for every field can be seen. This gives you a means of verifying how complete your information is. Actually, "all fields" should be somewhat qualified, i.e. if you have entered 0, 1 or 2 for number of marriages, only that many will show rather than the nominal maximum of 7. Only the fields defined in the "field order" using the MANAGER will be included in the sheet.

d) SHOW ID AFTER NAMES. The default is YES. This causes the person's record or ID number to appear with any name that is shown. The choice of record number vs. ID number is made according to the setting of the SUBSTITUTE SPECIAL ID parameter. The number is printed after the name. The default is YES since your normal use of sheets is to work with them, and using the numbers sometimes helps resolve ambiguity in cases where you have people with identical names. You may want to set this to NO before printing sheets for sending to your relatives.

e) TOP-OF-FORM AFTER PRINTS. The default is YES. This applies only to the printer. This causes the printer to move the paper to the top of the next sheet whenever it finishes one printing task, i.e. one sheet. Ejecting pages like this makes for neater printing, but it can waste a lot of paper.

f) SIZE OF LEFT MARGIN. This is the number of spaces inserted before the first printing at the left for individual sheets. The actual size of the margin in inches depends on your print size setting. The usual default is 10 spaces. If you set this too large, your sheet may not look right due to wrap-around, i.e. lines starting on one line continuing on the next. You may set this to zero if you want no margin. Note that you can force a right margin by setting your paper width in the MANAGER smaller than is actually present, for example, 7.5 inches when 8 is available.

g) USE LAST NAME FIRST. This affects whether every name is shown as "TOPHILEES, MEFIS G." or "MEFIS G. TOPHILEES". The first type appears when this parameter is YES, and the second type when it is NO. The default is NO. This should be somewhat qualified. If you enter full name rather than a number in one of your name fields (see 4.3.6), it will be shown or printed exactly as you saved it, and is not affected by this parameter.

h) SUBSTITUTE SPECIAL ID. This is usually set to NO. This parameter won't have any effect unless you have a User Defined Field which has been designated (using the MANAGER) as containing an ID or Identification in the genealogical sense (see section 3.5 if you don't understand what that means). The parameter is also dependent on SHOW ID WITH NAMES; if the latter is set to NO, the SUBSTITUTE SPECIAL ID will not do anything. Please see section 5.4, item t, for more information about the effects of this parameter.

Because the Special ID's aren't stored as part of each name, there will be a delay before each sheet is displayed or printed while the ID's are collected for all the names that are to appear in the sheet. Because of that, you will find that making forms with the Special ID substituted will take longer than without it.

i) PRINT SIZE. The default is 10 characters/inch. A normal range of values might be 8 to 17 char/inch. If your printer can't change character size, this parameter has no effect. See section 5.4 item i for more information.

j) SHOW NAME ONLY. This is normally NO. It applies only to screen tracing, and has no effect when printing. When it is set to YES, only the name of the person selected will be shown on the screen. With it set to NO, the information on the screen includes the name plus any fields defined for the individual sheet based on the setting of the USE SHORT FORM parameter. (Note: the contents of the short and long forms are defined using the MANAGER.)

k) SELECTIVELY SUPPRESS NOTES. This one is normally set to NO. When it is NO it has no effect on whether notes are printed or not.

When it is set to YES, the NUMBER OF NOTES field is checked to see if there is a Note Selector present (see section 4.3.5.6). If there is, only the fields you selected are printed. If the Note Selector is missing, all notes are printed, if there are any. If a note is omitted due to the Note Selector, any footnote references from other fields will also be suppressed.

l) SHOW MARRIED NAME. This is normally set to NO, meaning that a woman's maiden name is used instead of her married name. If it is YES, the married name is used. This parameter does not affect names stored directly instead of a number (see 4.3.6). If the USE LAST NAME FIRST parameter is set to YES, the first name shown will be the maiden name if the SHOW MARRIED NAME parameter is YES and the married name otherwise.

m) TAB BEFORE HEADER. This is the number of spaces to put in front of a header line for the headers you have defined. It allows you to position the header to the right or the left for ease of viewing. The default value is 10 spaces. If you choose a number too large, you may experience wrap-around of the header.

n) USE CUSTOM HEADER. This is normally set to NO. When it is NO, no header is printed with the individual sheets. When it is YES, you will be asked to define a header. Please see section 5.4 item o for details on the steps used to define a header. One header is used on every page for the entire set of names accessed.

o) APPEND 'TEXT' FILE. This is normally set to NO. When it is YES, you are given the opportunity after each individual sheet to insert any text for the same person made using the WORDS program or your word processor. When the parameter is set to NO, no extra printing is done and PERSONS proceeds directly to the next person you selected via the access menu. Appending text makes certain assumptions about the names of files where the added text is to be found; please see sections 7.4 and 11 for details.

p) FIRST SHEET NUMBER. This is normally 0; with that setting, the individual sheets are not numbered. When this is 1 or larger, a sheet number will be printed at the top right of each page. The numbers will start at the value of this parameter, and each successive sheet will have one higher number. The first access selection gets the first number, and all succeeding sheets are numbered sequentially until you return to the PERSONS main menu; note that the numbers continue to increment when you go from one screen trace to the next on the same access selection.

q) LINES PER PAGE. This is the approximate maximum number of lines that will be printed on each sheet of paper, normally 55 lines.

This is an "approximate" maximum because items in the sheet that are related won't be split across the page boundary. If you set this parameter to zero, printing will be continuous with no page break.

r) USE SHORT FORM. This is normally set to NO. There are two possible field order definitions, made using the MANAGER. One can be thought of as the "long form" and might include all the fields in whatever order you want. The other field order can be thought of as the "short form" and might include only the parents or children fields. This parameter allows you to select the "long form" when set to NO, and the "short form" when set to YES. The usual intention in setting this to YES is to have more rapid displays when doing screen tracing. However, the long form and short form are entirely independent of each other and can include any fields you want, in any order; the short form could be longer than the long form.

s) ACCEPT LONG LINES. This is normally set to NO. This parameter is intended to let you append text file from certain troublesome word processors. If you are using our WORDS program to make your text files, you won't need to change this.

When the parameter is set to NO, the usual BASIC method of retrieving a line of text from a disk file is used. Some word processors store their text in such long lines on the disk that the usual method doesn't operate correctly. By setting the parameter to YES, you will cause PERSONS to read the disk file character-by-character rather than by line. With this change in method, PERSONS is able to break the long lines into smaller sizes as it reads them. **Warning: having the parameter set to YES will make appending text very slow.

t) DATE. The date is not used at all by PERSONS. If you change the date here, it will have the same new value when you exit PERSONS to any of the other programs except LISTS and MANAGER.

7.6 Checking Diskettes

This main menu item allows you to switch diskettes and tell PERSONS about it. We repeat our admonition not to change diskettes unless told otherwise. Please see section 5.5 for more detailed nagging.

7.7 Exiting PERSONS

Exiting PERSONS is almost like exiting EDIT, but with no names to save. Please see section 4.7 for details on the exit menu.

7.8 Miscellaneous Information on PERSONS

Several of the items on EDIT discussed in section 4.8 are valid here, too. Please reread that section if you need to. The items that pertain to PERSONS are:

a) PRESS ANY KEY TO CONTINUE is used to prevent information from scrolling off the top of the screen before you see it.

b) CTRL-Z aborts to the main menu

c) Any question may be answered with **<'return'>**

d) GOTO 20000 usually (not infallibly) gets you back into PERSONS after an error.

(The pristine beauty of this page is despoiled to make the next page odd-numbered.)

8. DETAILED USE OF GROUPS

The GROUPS program prints two kinds of family group sheets, one in the format used by the Mormons, and the other in a less structured style that can be printed on any size of paper. If you haven't read the section on the EDIT program yet, we suggest you do so; it is important to the understanding of what you can do here. In order to get started with GROUPS, you can boot as described in section 3 and choose GROUPS from the programs menu, or you may get to the programs menu after having run one of the other FAMILY ROOTS programs.

The drive with the program diskette will whirr for a while as GROUPS is being loaded, followed by the message

```
PRESS ANY KEY WHEN YOUR DATA DISKETTES
ARE IN THE DRIVES.
```

Be sure that at least one data diskette is present and that every drive has some diskette in it. When you press that key, GROUPS will read every diskette to determine the location and identity of each.

8.1 GROUPS Main Menu

After the diskettes are checked, the GROUPS main menu will appear, giving you the following choices:

```
A)  PRINT WIDE FORM
B)  PRINT NARROW FORM
C)  CHANGE PROGRAM PARAMETERS
D)  CHECK DISKETTES
E)  EXIT PROGRAM
```

As usual, the titles are indicative of the function to be performed. GROUPS prints two different group sheets in two different formats based on your selection of a husband or wife. The first two choices are for the two formats. The program parameters mainly affect how the data is printed or shown. Checking diskettes is how you swap diskettes under your own volition. And exit exits, oddly enough! We'll discuss each of these items in more detail after a brief section on accessing names and records.

8.2 Accessing Records and Names

When you select either of the first two items on the GROUPS main menu, you then need to tell GROUPS which records or people you are interested in. You are given a choice of specifying number range, a list of numbers, or parts of a name, and sometimes a list saved in memory. This

choice works the same as in EDIT as described in section 4.3.1. We suggest you read that section again if you need a refresher.

For each person found, using your access choices, a group sheet will be printed. The person found is used as the Husband or Wife in the group sheet. If you access the names of both the husband and wife, two identical sheets will be generated. You do not have to specify the children, their spouses, and other spouses of the husband and wife -- these are located for you by GROUPS based on the data you stored.

If you find that your access choices were too ambitious, or if you want to return to the main menu for any reason, type **<CTRL-Z>**. As we have said many times before, please don't switch diskettes unless you are told to do so or unless you are at the main menu and can cause the diskettes to be checked.

8.3 Printing Family Groups

A family group sheet collects all the pertinent information for a family unit and prints it. The family unit is a normally husband and wife plus all the children of that union. Other husbands of the wife or wives of the husband and their offspring would be the subject of different group sheets.

A family group sheet is started by your choice of the husband or the wife to be used. You are first shown the name of the person found from your access selection, and you are asked to verify before proceeding with something like

```
PRINT WIDE GROUP SHEET FOR
AUBREY WENTWORTH

OK TO CONTINUE (Y/N/P/C)?
```

If you answer with **<Y>** or **<'return'>**, generation of the sheet will continue, while **<N>** goes back for your next access selection if any. Choosing **<P>** gets you the CHANGE PARAMETERS menu; the parameters affecting group sheets are listed in detail in section 8.4. The C means "continue" and is your means of avoiding being asked this question again until you use the access menu once more; this allows you to generate several group sheets without staying near your computer.

Examples of the two types of family group sheet are shown in Figures 17 and 18. There are several major differences between the two forms. The form shown in Figure 17 is highly structured, with each piece of information to be printed in a particular position in the sheet. By contrast, the form in Figure 18 is more loosely organized, with selected information to be shown on a particular line, but no restrictions on a

HUSBAND: WALTER VORENBERG (RN=21)
Born 14 May 1892 Place CLEVELAND NM
Chr. Place
Marr 09 Jun 1915 Place LAS VEGAS NM
Died 16 Apr 1979 Place LAS VEGAS NM
Bur. Place
HUSBAND'S
FATHER: SIMON VORENBERG (RN=8)
HUSBAND'S
OTHER WIVES:

HUSBAND'S
MOTHER: THERESA HARRIS (RN=9)

WIFE: CAROLYN HARBERG (RN=22)
Born 29 Feb 1896 Place MORA NM
Chr. Place
Died 05 Jun 1968 Place LAS VEGAS NM
Bur. Place
WIFE'S
FATHER: CARL HARBERG (RN=11)
WIFE'S
OTHER HUSBANDS:

WIFE'S
MOTHER: JULIA KLEIN (RN=10)

M/F	CHILDREN	WHEN BORN	WHERE BORN	FIRST MARRIAGE	WHEN DIED
1 M	HARRY MATTHEW VORENBERG (RN=23)	26 Nov 1916	WAGON MOUND NM	20 Aug 1939 ESTHER JOSEPHINE MAYER (RN=20)	18 May 1975
2 F	BARBARA VORENBERG (RN=86)	24 Oct 1919	WAGON MOUND NM	22 Aug 1942 GEORGE THOMAS REYNOLDS (RN=101)	
3 M	WILLIAM VORENBERG (RN=87)	27 Apr 1921	WAGON MOUND NM		

SOURCES OF INFORMATION

OTHER MARRIAGES

2-HARVEY BOND (NO RN)
2-JOHN WRIGHT (NO RN)

WIDE GROUP SHEET (LDS)

FIGURE 17.

HUSBAND: WALTER VORENBERG (RN=21)
B: 14 May 1892 @ CLEVELAND NM
M: 09 Jun 1915 @ LAS VEGAS NM
D: 16 Apr 1979 @ LAS VEGAS NM
OCC: MERCHANT

WIFE: CAROLYN HARBERG (RN=22)
B: 29 Feb 1896 @ MORA NM
D: 05 Jun 1968 @ LAS VEGAS NM
OCC: BOOKKEEPER

CHILDREN

1 M HARRY MATTHEW VORENBERG (RN=23)
B: 26 Nov 1916 @ WAGON MOUND NM
M: 20 Aug 1939 TO ESTHER JOSEPHINE MAYER (RN=20) @ LAS VEGAS NM
D: 18 May 1975 @ TAOS NM
OCC: SALESMAN

2 F BARBARA VORENBERG (RN=86)
B: 24 Oct 1919 @ WAGON MOUND NM
M: 22 Aug 1942 TO GEORGE THOMAS REYNOLDS (RN=101) @ LAS VEGAS NM (Widowed)
RM: --/--/1968 TO HARVEY BOND (NO RN) @ SANTA FE NM (Divorced)
RM: 22 Apr 1981 TO JOHN WRIGHT (NO RN) @ ALBUQUERQUE NM
Living @ RATON NM
OCC: MERCHANT

3 M WILLIAM VORENBERG (RN=87)
B: 27 Apr 1921 @ WAGON MOUND NM
Living @ NEW YORK NY
OCC: TEACHER

SOURCES OF INFORMATION

NARROW GROUP SHEET

FIGURE 18

column the data is to appear in. The content of Figure 17 is unvarying, i.e. you can't add or delete the fields to be included on the form. You can select what fields to include in Figure 18 using the MANAGER. Figure 17 needs at least 120 columns of width in order to be printed, implying either small print or a wide-carriage printer. Figure 18 will print in any size you want.

The steps that GROUPS goes through to prepare each form are identical. Only the final format is distinct. That means the impact of your parameter selections will be the same, regardless of which form you choose. We will first discuss the consequences of your choices of several important parameters. If you are using GROUPS for the first time, it is probably not critical to understand all these details immediately -- we have made selections of the parameters that will allow you to make family group sheets for most of your families in a conventional way.

Determining the Children and Spouse for the Sheet. The USE ALL CHILDREN parameter has a significant impact on what's included in the sheet; we need to look at that before continuing. As mentioned above, the normal sheet shows a husband and wife plus the children of that union only. The usual way of determining the children of the union is to compare the children stored in the husband and wife's records. Sometimes, however, you may have chosen not to make a record for either the husband or wife, so there is nothing to compare. When the USE ALL CHILDREN parameter is set to NO, GROUPS won't continue with the group sheet preparation since accurate information may not be available. You can force it to go ahead by setting the parameter to YES, in which case it will use all the children from the record of the selected parent, with no attempts at matching made. The parameter works even if there are records for both parents available, however, since you may want to force the program to put all of the children on the sheet, regardless of who the parent was. As you can see, the parameter may affect which spouse you are allowed to choose for the sheet (if there are multiple spouses) and may affect how many and which children will appear.

Let's look first at the case where the USE ALL CHILDREN parameter is NO. After you verify the name, GROUPS checks to see if that person has exactly one spouse, and uses him or her if so. If there are no spouses with numbers available, the sheet generation is cancelled. If there is more than one spouse, you will be asked which one. For example, suppose you choose a sheet for Aubrey Wentworth, and he had three wives, Jane, Arlene and Claire. Suppose also that you entered numbers in Aubrey's record to show the relationship to Jane and Claire, but Arlene was stored as a name rather than a number (see 4.3.6). You will see

```
WHICH SPOUSE DO YOU WANT ON THE SHEET:
     1)   JANE WENTWORTH
     2)   ARLENE WENTWORTH**
     3)   CLAIRE WENTWORTH

(** NO RECORD AVAILABLE)

CHOICE (1-3)?
```

If you choose 1 or 3, generation will continue since information is available. If you choose 2, you will see

```
THE HUSBAND AND WIFE'S RECORDS ARE NOT
CONNECTED.  SHEET GENERATION IS NOT
POSSIBLE AT THIS TIME
```

followed by a return to the next name accessed, or the main menu if there were none. The presence of records for both the husband and wife is necessary because the children of the union are found by matching the two records when the USE ALL CHILDREN parameter is set to NO. You could generate a sheet using Arlene by returning to EDIT to create a record for her.

When you have the USE ALL CHILDREN parameter set to YES, similar things happen, except that the construction of the group sheet will not be cancelled as long as there is at least one spouse. After verifying your choice of name (Aubrey Wentworth in the above example), GROUPS checks to see if there is exactly one spouse, and uses that person if so. With more than one spouse, you may select any of the spouses, even if he or she is stored as a name rather than a number. The children that will be included in the sheet are those found in the record of the selected person, regardless of who the spouse is and how he or she is stored.

Example Showing Which Spouse and Children are Included. As mentioned above, the children included in the group sheet depends on the setting of the USE ALL CHILDREN parameter. When it is off, the children of this husband and wife are found by comparing the children you have stored in the husband's and wife's records. Those that are in both places are used. For example suppose Aubrey's record shows 3 children

```
DAN WENTWORTH  (RN=401)
GABE WENTWORTH (NO RN)
JUNE WENTWORTH (RN=402)
```

while Claire's record shows these 3 children

```
JUNE WENTWORTH (RN=402)
DAN WENTWORTH  (RN=386)
GABE WENTWORTH (NO RN)
```

Notice that the two Dan's are different people, since they have distinct RN's. The children that will be included in the group sheet will be June and Gabe.

With the USE ALL CHILDREN parameter YES, it doesn't matter how the husband and wife's records compare. Suppose we look at the above example for Aubrey and Claire. If Aubrey was the person you selected on the access menu, then the children on the sheet would be

```
DAN WENTWORTH (RN=401)
GABE WENTWORTH (NO RN)
JUNE WENTWORTH (RN=402)
```

Similarly, if the person you chose on the access menu was Claire, then you would get

```
JUNE WENTWORTH (RN=402)
DAN WENTWORTH (RN=386)
GABE WENTWORTH (NO RN)
```

on the sheet.

What Happens Before Printing Starts. Once the question of which husband and wife combination has been settled, GROUPS next needs to figure out which is the husband and which the wife. If you have defined a SEX field for yourself and have stored data there for these people, that is how the decision is made. If that can't be done (no SEX field or nothing stored), GROUPS then tried to see which is the woman by checking if a Married Last Name is present for either person. If there is still no success, the last resort is to ask you

```
IS AUBREY WENTWORTH MALE?
```

We hope it is obvious what a Y/N answer produces. A **<'return'>** answer causes an assumption of YES.

It is usually preferable that the children in the sheet be listed in order of birth, from the oldest to the youngest. GROUPS will attempt to put them in order if you have the PUT CHILDREN IN ORDER parameter on. GROUPS can do the ordering if all children's birthdates (in their own records, not in the parent's ones) are in the standard format (see section 4.3.4), since the program can tell what the month, day, and year are in this case. If there are non-standard birth dates or if there are children without records, GROUPS will not attempt to order the children when you have the parameter set to YES.

If the PUT CHILDREN IN ORDER parameter is NO, the order of the children in the group sheet will be the same order as they are stored in one of

the parent's record. With the USE ALL CHILDREN parameter set to NO, the order in the husband's record is used. Otherwise, the order in the record of the parent selected via the access menu is used. For example, if you asked for a group sheet for Claire Wentworth, then you'd get June, Dan, and Gabe, in that order.

If ordering of the children is being done, it happens before the group sheet is printed. A message on the screen shows when it is happening.

The last section of the group sheet is for showing sources. Sources are assumed to be stored in the notes for the husband, wife and children. However, other information might be present in the notes. When the USE FLAGGED NOTES parameter is set to YES, you will see

```
PLEASE WAIT...

        DOING PRELIMINARIES
```

on your screen.

If the USE FLAGGED NOTES parameter is set to NO (see section 4.3.5.6 for a discussion of flags), GROUPS has no way to tell what is a source other than by asking you. The questions will happen before the sheet is printed. If you want to avoid the questions by omitting all reference citations, you can set the OMIT SOURCES/NOTES parameter to NO. (The questions are asked before printing the sheet in order to be able to use the proper footnote references on any fields where they occur in your data.)

Each note is retrieved and shown to you on the screen for your decision as to whether to include it. You may see something like

```
NOTE 1 FOR JANE WENTWORTH:
JANE HELD WOMEN'S GOLF CHAMPIONSHIP 1937

INCLUDE IN SHEET?  <N>

NOTE 2 FOR JANE WENTWORTH:
INFO OBTAINED FROM DAUGHTER BARBARA

INCLUDE IN SHEET?  <Y>
```

If you have the same source indicated in different records, this also gives you the control to prevent multiple printing of the same source. If you want to omit all further notes, answer the question with **<CTRL E>** (E as in erase).

When the USE FLAGGED NOTES parameter is set to YES, no questions will be asked. Those notes that begin with the footnote character (see 4.3.5.6)

will be included in the sheet, and all others will be omitted. The same source recorded in different people's records might appear in the list of sources more than once.

8.3.1 Making the Wide Group Sheet

The format used for the wide group sheet is the standard one promoted by the Church of Jesus Christ of the Latter-Day Saints, the Mormons; this is the example shown in Figure 17. The information requested by their standard form will be included in a sheet if you have it available. In particular, dates and places of christening and burial are used; if you defined these fields for your own use, GROUPS will know which they are and include the information stored there in the sheet.

One difficulty inherent in the Mormon form is its width, since it packs a great deal of information in a horizontal format. Consequently GROUPS must have sufficient width on your printer in order to construct one of these forms. You will need at least 120 columns of width. Having that width depends on the capabilities of your printer, and could be accomplished either by printing in small type or by using wide paper.

When there isn't enough width available to print the group sheet based on your parameter selections, GROUPS will adjust the parameters to the closest settings that make it possible to continue. You will be told when this occurs. The parameters that might be altered would be PRINT SIZE and SIZE OF LEFT MARGIN; no change will be attempted to paper width. If there are no alterations that make it possible to continue, the printing of the wide group sheet will be cancelled and you will be returned to the GROUPS main menu.

****
If you have a printer that doesn't supply the necessary number of columns, you won't be able to use this form.
****

The wide group sheet starts with a header if you define one, as controlled by the USE CUSTOM HEADER parameter. There is no standard header, so the first thing that appears if you don't request a header is the husband's information.

The top part of the sheet has the husband's name, followed by date and place combinations for birth, marriage, death, plus christening and burial if you are using them. Alternate marriages for the husband are then shown, if any. Next comes a similar section for the wife, with exactly the same possibilities except that the marriage date and place are not repeated. When the USE ALL CHILDREN parameter is set to YES and

either the husband or wife is stored with no RN (i.e. as a name only), then only that name will appear in the top portion of the sheet, without any associated information.

The information for each child is printed in two lines. Each child is preceded by a sequential number, e.g. 4 for the fourth child. If the child has no RN, the name is shown without the RN even if the SHOW ID WITH NAMES parameter is set. For the others, GROUPS will print the name, date and place of birth, first marriage if any, and date of death if appropriate. The first marriage includes the date and the name of the spouse. If there are other marriages for any of the children, they are saved and printed at the bottom of the sheet.

The sources determined from the preliminary checks are printed at the bottom of the sheet. Numbers or letters appear in front of each source showing who it is for and which note it is. The first prefix would be "H-" for the husband, "W-" for the wife, or the child number for each child, showing whose note it is. After that the note number would appear. A typical note might look like

W-3-1790 Census

showing a reference in note 3 of the wife's record to the 1790 census. The "^3" will be printed on any field from the wife's record stored with such a reference. This gives you the capability to cite sources for specific items in the sheet, not just by person.

8.3.2 Making the Narrow Group Sheet

The format used for the narrow group sheet has a style similar to that used when printing "full information" in the free-form charts. The example is shown in Figure 18. The fields to be included in the form and the order in which they appear is defined using the MANAGER. This means you can design your own form to some extent.

This form can be printed using any character size you wish. There are no restrictions on number of columns at all.

The narrow group sheet starts with a header only if you define one, as controlled by the USE CUSTOM HEADER parameter. There is no standard header. If you don't have a custom header, the first thing that appears is the husband's information.

Each part of the sheet has about the same structure. The name will appear first. Following that will be the fields in the order you selected. Fields that are connected will be printed together in the same line.

The husband's information appears at the top of the form, followed by the wife's. If you are including marriage data in your form, the marriage data for the wife that pertains to the husband on the form won't be included. The next section of the form shows each of the children. Each child is preceded by a sequential number, e.g. 5 for child number five.

The sources determined from the preliminary checks appear at the bottom of the form. The format is identical to that on the wide group sheet; please see the previous section, 8.3.1, for a description of this.

8.4 Changing Program Parameters

There are seventeen parameters available in GROUPS that affect the printing of the group sheets. A starting value is normally assumed for each of these, so you don't need to worry about setting them when you are just learning to use GROUPS. You can change the starting values by resetting them using the MANAGER program as described in section 12.

There is a menu and procedure for changing parameter values, accessed by selecting **<C>** from the main menu, or **<P>** from the person verification before a group sheet. The menu shows the brief titles for each of the parameters you may have seen mentioned above, along with its current value. To change a value, press the letter in front of the parameter name and supply the new value in response to the question asked. If you made the wrong parameter selection you may preserve the old value by pressing **<'return'>**. After each change the menu is regenerated, and you can inspect it to see that your change was properly detected. You can escape to the source of the parameter selection access by pressing **<'return'>** instead of the letter.

Since the procedures for changing parameters are the same in all the programs, you might want to refer to the corresponding sections for other programs if you are confused or need more details, e.g. 4.6 for EDIT or 5.4 for FREEFORMS.

The following paragraphs discuss each parameter:

a) USE MONTH NAMES. This is a YES/NO parameter. It is normally set to YES. When it is YES, the three character abbreviation for the month is used in printing all dates where this is possible. An example date of this type is 13 Jun 1926. If it is set to NO, the date is printed with all numbers using the familiar slashed format. In this case the order of the day and month depends on the value you selected for DAY/MONTH ORDER in the MANAGER program. An example of this format would be 25/06/1922 in the order day-month, and 06/25/1922 in the order month-day. The standard order for genealogists is day-month. Imprecise dates such as About 1850 are

printed exactly as stored, and are not affected by this parameter.

b) PRINT EMPTY FIELDS. The default is YES. When this is set to NO, GROUPS includes in the free-form charts only those fields that are not empty. When a field is empty, no line or space for that field appears. On the other hand, when this parameter is set to YES, a place for every field can be seen. This gives you a means of verifying how complete your information is. Actually, "all fields" should be qualified, i.e. if you have entered 0, 1 or 2 for number of marriages, only that many will show rather than the nominal maximum of 7. Also, only the fields defined to be included in the form will appear.

c) SHOW ID WITH NAMES. The default is YES. This causes the person's record or ID number to appear with any name that is printed. The choice of record number is controlled by the SUBSTITUTE SPECIAL ID parameter. The number is printed after the name. The default is YES since using the numbers sometimes helps resolve ambiguity in cases where you have people with identical names. You may want to set this to NO before printing sheets for sending to your relatives.

d) TOP-OF-FORM AFTER PRINTS. The default is YES. This causes the printer to move the paper to the top of the next sheet whenever it finishes one printing task, i.e. one sheet. Ejecting pages like this makes for neater printing, but it can waste a lot of paper.

e) SIZE OF LEFT MARGIN. This is the number of spaces used for the left margin. The actual size of the margin in inches depends on the setting of the PRINT SIZE parameter. The usual default in spaces is 10. If you set this too large to allow enough space for the wide group sheet, GROUPS may alter it before doing the sheet. You may set this to zero if you want no margin. Note that you can force a right margin by setting your paper width in the MANAGER smaller than is actually present, for example, 7.5 inches when 8 is available.

f) USE LAST NAME FIRST. This affects whether every name is shown as "TOPHILEES, MEFIS G." or "MEFIS G. TOPHILEES". The first type appears when this parameter is set to YES, and the second type when it is NO. The default is NO. This should be somewhat qualified. If you enter full name rather than a number in one of your name fields (see 4.3.6), it will be shown or printed exactly as you saved it, and is not affected by this parameter.

g) SUBSTITUTE SPECIAL ID. This is usually set to NO. This parameter won't have any effect unless you have a User Defined Field which has been designated (using the MANAGER) as containing an ID or

Identification in the genealogical sense (see section 3.5 if you don't understand what that means). The parameter is also dependent on SHOW ID WITH NAMES; if the latter is set to NO, then SUBSTITUTE SPECIAL ID will not do anything.

Let's assume the SHOW ID WITH NAMES parameter is set to YES. When SUBSTITUTE SPECIAL ID is set to NO, either the record number of "(NO RN)" will be shown after each name appearing on the wide or narrow group sheet. If it is set to YES, then your ID number would appear after each name instead. If the person has no RN, then no ID would be placed after the name unless you included it as part of the name itself.

The Special ID's have to be retrieved before printing a sheet since they aren't stored with each name. This will cause an extra delay before the printing is started.

h) PRINT SIZE. The default is 16.5 characters/inch. A normal range of values might be 8 to 17 char/inch. The wide group sheet must have at least 120 characters per line available because of the amount of information per line. This parameter may be altered automatically to provide a sufficient number of columns. If your printer can't change character size, this parameter has no effect.

i) PUT CHILDREN IN ORDER. This is usually set to YES. When it is YES, GROUPS will try to order the children in the sheet from oldest to youngest by birthdate. The success of the operation depends upon whether the birthdates are saved in the standard date format (see 4.3.4) for all of the children. If this parameter is set to NO, the children will appear in the same order as they were saved in the husband's or wife's record, depending on who was selected for the sheet and the setting of the USE ALL CHILDREN parameter.

j) OMIT SOURCES/NOTES. This has a default of NO. When it is NO, the notes that are determined to contain source citations will be printed at the bottom of the group sheet. When it is YES, no sources will be printed. Source citations are determined in one of two ways, depending on the setting of the USE FLAGGED NOTES parameter.

k) SHOW MARRIED NAME. This is normally set to NO, meaning that a woman's maiden name is used instead of her married name. If it is on, the married name is used. This parameter does not affect names stored directly instead of a number (see 4.3.6). If the USE LAST NAME FIRST parameter is on, the first name shown will be the maiden name if the PRINT MARRIED NAME parameter is on and the married name otherwise.

l) TAB BEFORE HEADER. This is the number of spaces to put in front of a header line for the headers you have defined. It allows you to position the header to the right or the left for ease of viewing. The default value is 10 spaces. If you choose a number too large, you may experience wrap-around of the header.

m) USE CUSTOM HEADER. This is normally set to NO. When it is off, no header is printed with either the individual or the group sheets. When it is on, you will be asked to define a header. Please see section 5.4 for details on the steps used to define a header. For individual sheets, one header is used on every page for the entire set of names accessed. For group sheets, a header may be individually defined for each sheet.

n) USE FLAGGED NOTES. The usual value is NO. When this is set to YES, those notes in each person's record that begin with the footnote character (see 4.3.5.6) are assumed to be source citations and are included in the group sheet. Otherwise, you will be shown every note found and asked to decide whether it is a source to be included on the group sheet. Your use of this parameter depends on how you chose to enter your notes that are sources. It lets you avoid a multitude of questions in the preparation of the group sheet.

o) USE ALL CHILDREN. The normal genealogical method of preparing a group sheet is to include only the children that are the offspring of a particular husband and wife. When this parameter is set to NO, which is its default value, that is what happens: the husband's and wife's records are compared to find their children. When this parameter is set to YES, you force the program to use all of the children in the selected parent's record, regardless of whether they are the offspring of the selected spouse. This parameter is intended particularly for the situation where you haven't made a record for a spouse but want to have a group sheet printed, which wouldn't be possible if records were to be compared.

p) LINES PER PAGE. This is the approximate maximum number of lines that will be printed on each sheet of paper in the group sheets, normally 55 lines. This is an "approximate" maximum because items in the group sheet that are related won't be split across the page boundary: the full entry for a child won't be split over a page break. If you set this parameter to zero, printing will be continuous with no page break.

q) DATE. The date is not used at all by GROUPS. If you change the date here, it will have the same new value when you exit GROUPS to any of the other programs except LISTS and MANAGER.

8.5 Checking Diskettes

This main menu item allows you to switch diskettes and tell GROUPS about it. We repeat our admonition not to change diskettes unless told otherwise. Please see section 5.5 for more detailed nagging.

8.6 Exiting GROUPS

Exiting GROUPS is almost like exiting EDIT, but with no names to save. Please see section 4.7 for details on the exit menu.

8.7 Miscellaneous Information on GROUPS

Several of the items on EDIT discussed in section 4.8 are valid here, too. Please reread that section if you need to. The items that pertain to GROUPS are:

a) CTRL-Z aborts to the main menu

b) Any question may be answered with <'return'>

c) GOTO 20000 usually (not infallibly) gets you back into GROUPS after an error.

(Oops! This page was almost blank.)

9. DETAILED USE OF LISTS

The LISTS program constructs lists of people's names in alphabetic or numeric order. This is really a program for manipulating names in a variety of ways. There are several familiar ways to select the names to be included in a list, as well as a new one, the one to pick out all names that sound alike. Lists can be stored in memory, saved to diskette, retrieved from diskette, and merged. You'll see how all of this works in the following sections. If you need to be reminded about the four components of a name in FAMILY ROOTS, you would do well to reread section 4.2 on EDIT before reading this section.

LISTS can't talk to the other programs like they do among themselves. This means that any lists of names made using the LISTS program won't be resident in memory any more when you move on to another main program, nor is the date preserved if you make any changes to it here. There is a very good reason why LISTS doesn't talk, namely, it needs much more space for names than the others do, and it would force that space to be held free by the other programs even though they need to use it too.

A method has been provided to pass names from LISTS into the other programs via use of diskette. LISTS can save names to diskette and the READER program can then read the diskette to put the list into memory. When the list is in memory in READER, others of the main programs can be selected and run, with that list being preserved. This is only valid for a small list, usually 99 names or less, that will fit in the available memory space.

In order to get started with LISTS, you can boot as described in section 3 and choose LISTS from the menu of programs, or you can get to the menu of programs after having run any other program. If you get the wrong program diskette, there is a selection on the menu of programs that allows you to move to the right one.

The drive with the program diskette will whirr while LISTS is being loaded, followed by a message like

PRESS ANY KEY WHEN YOUR DATA DISKETTES ARE IN THE DRIVES

Be sure that at least one data diskette is present and that there is some diskette in every drive. When you press a key, LISTS checks all the drives to find the location and identity of the data diskettes.

9.1 LISTS Main Menu

After the diskettes are checked the LISTS main menu will appear, giving you the following choices:

A) MAKE ALPHABETIC LIST
B) MAKE NUMERIC ORDER LIST
C) MAKE SPECIAL LIST
D) CHANGE PROGRAM PARAMETERS
E) CHECK DISKETTES
F) EXIT PROGRAM

The first two choices produce a list of names, either alphabetic by surname or in ascending RN order, depending on the choice. After selecting one of these you will be asked to select the names to be included using the access menu. Selecting the third item on the above list produces a menu of six special functions that make lists, repeat lists previously done, etc. as described in detail in a subsequent section. The final three items should be familiar by now if you are reading this manual from front to back, since they appear on all the main menus.

Following the section on name access, results of each of the selections from the main menu is described in detail.

9.2 Accessing Names, Including SOUNDEX

When you select either of the first two items on the main menu, you will be asked to choose which set of names to include in the list. This access menu has six items instead of the usual 3 or 4, as follows:

A) NUMBER RANGE
B) NUMBER LIST
C) NAME SETS
D) SURNAME SOUNDEX
E) SURNAME PARTIALS
F) WHOLE DISKETTE

The first two access choices work exactly as described for EDIT in section 4.3.1, except in this case only the names will be retrieved. For "number list," each name is retrieved immediately after each number you type, rather than waiting for the entire list.

The third choice works almost the same as for EDIT, but with one exception; you can ask that upper/lower case differences be ignored between what you specified and what is selected. This is done with the IGNORE UPPER/LOWER CASE parameter, which can be accessed and changed by pressing <P> from the access menu above. An example will show what

happens with this. Suppose you say you want to find everybody with "Ann" as part of their first name. If the parameter is set to NO, then "Joann Quickly" will not match and won't be listed, since the "a" in Joann is lower case but you specified upper case "A". On the other hand she will be added to the list if the parameter is YES, since you told LISTS that "a" and "A" were to be treated the same. If you can find the right names with the parameter set to NO, it is better to do it that way, since the search for the right names with it YES takes significantly longer to do.

If you ask for WHOLE DISKETTE, LISTS checks to see if there is only one data diskette available in a drive or volume. If so, that one is used. If not, LISTS will ask you which of the data diskettes to use, with

```
WHICH DRIVE (1-4)?
```

where the number of drives agrees with your system, not our mythical one. If you respond with **<'return'>** you will be returned to the main menu -- generating a list is not a brief operation and LISTS doesn't know which diskette you want. If you supply a drive number that doesn't have a data diskette in it, you will see (oddly enough)

```
THAT DRIVE DOESN'T HAVE A DATA DISKETTE
WHICH DRIVE (1-4)?
```

Once you supply a valid drive, LISTS starts the process of retrieving names.

Surname Soundex

The SURNAME SOUNDEX choice is what you use to find a set of people whose last names sound alike although they may be spelled differently. When you make this choice you will be asked

```
MAKE ALPHABETIC LIST FOR ALL
SURNAMES SOUNDING LIKE:
```

where you must supply a name. If you press **<'return'>** you are back to the main menu.

After choosing the surname, you will be asked for starting and ending record numbers (RN's). Only the names with RN's between these two numbers would be examined. If you answer with **<'return'>** to

```
START NUMBER?
```

LISTS will assume a you want to start with the smallest RN now available in a drive. Answering **<'return'>** to

```
END NUMBER?
```

will get you the largest RN available in one of the drives that can be reached without a break from the start number. For example, if a) the start number is 500, b) you press 'return' for the end number question, c) you have data diskettes number 2, 3, and 5 in your drives, and d) there is space for 400 people on each of your diskettes, the result would be a search of diskettes 2 and 3 but not 5.

After giving the surname and number range, LISTS will search all the RN's in the range for surnames that sound like the one you supplied. On SOUNDEX searches, the surname at birth is always searched, but others can be searched too depending on parameter settings. If you have the USE MARRIED NAME parameter set to YES, the Married Last Name will also be checked to see if it sounds like the surname you supplied. You may recall that we suggested you could put anything in the Title part of a name, including alternate spellings. If you did that, you can have the Title searched for "sound-alikes" by setting the SEARCH TITLE WITH SOUNDEX parameter set to YES. Note that these two searches are in addition to the Last Name at Birth search, not instead of it.

Don't expect the results of sound-alike searches to produce perfect results. There is still a bit of art in this particular science. Names may be missed and wrong ones found. The problem for surname searches in the U.S. is particularly difficult due to the many possible national origins of the names. For example J in English is different from the one in Spanish (said like an English H), and the one in German (said like an English Y). We have set LISTS to work moderately well with north European names. If yours are heavily Latin in origin, LISTS may need to have some small adjustments made to produce better results. An example is the Spanish LL which is probably akin to the English J when pronounced properly. You may contact us for suggestions in this area.

We have used the Soundex on our own family names. It properly finds our surnames sounding like Yeast to be Yaist, Yaste and Jost. Similarly Rectors and Richters all get found properly. We wish you good luck with this and welcome your feedback to help improve the algorithm.

Surname Partials

The SURNAME PARTIALS choice is what you use to make a list of everybody beginning with the same letter of the alphabet, for example, everybody beginning with M. In fact, you may specify more than one starting letter. For example, you could specify "Mac" to get all the MacDonald's and MacNeil's, etc.

When you make this choice, you will be asked

```
MAKE ALPHABETIC LIST WITH ALL THE
SURNAMES STARTING WITH:
```

where you must type one or more letter. After that you are asked

START NUMBER?

and

END NUMBER?

with exactly the same results as described above for Surname Soundex.

After giving the starting letters and numbers range, LISTS will search all RN's in that range. The results of the search depend primarily upon three parameters. If USE MARRIED NAME is set to YES, only those people with married name beginning with the specified letters will be included. Similarly, if USE MAIDEN NAME is set to YES, only those maiden names starting with your letters are used.

Let's consider an example. Suppose you have selected M as your starting letter and have

Ann Winthrop Mahoney
Jane Miller Miner
John Mulcahy

in your data. We're assuming that the two last names for the first two ladies are last name at birth and married last name, respectively.

With USE MAIDEN NAME set to YES and USE MARRIED NAME set to NO, you would get

Miller, Jane
Mulcahy, John

on your list. On the other hand, with both parameters set to YES, you would get

Mahoney, Ann Winthrop
Miller, Jane
Miner, Jane Miller
Mulcahy, John

included. We threw John into the example so you wouldn't get worried about men and single people.

The third important parameter is IGNORE UPPER/LOWER CASE. When this is set to NO, only an exact match to the starting letter(s) you typed will be found and included in the list. When it is set to YES, upper and lower case differences will be ignored. The latter case will be slower in operation however.

9.3 Making Alphabetic and Numeric Lists

This section discusses how LISTS constructs the lists of names, how they are output, and what parameters affect them. The generation of alphabetic and numeric ordered lists is quite similar, with the major difference being the pause required while alphabetizing takes place. Both types of lists are saved in memory until another list is requested, which allows you to review it again and other such possibilities.

After you have made your access choices, LISTS retrieves the names. You may need to switch diskettes when your number list has a person not available on one of the current diskettes, or when your number range advances from the names on one diskette to the next higher one. The name set, Soundex, and Partials selections must search through all the available names and therefore take longer.

LISTS stores the names in the computer's memory until your entire set of names has been retrieved, or until the available memory has been used up. If you are doing a numeric list, it would be printed or displayed at that point before continuing. When doing an alphabetic list, the results may depend on the setting of the MERGE AUTOMATICALLY parameter. If it is set to NO, LISTS will assume there aren't any more names to be included in the list when the memory space is exhausted. With it set to YES, LISTS will alphabetize and save the list in memory, and resume its search for names to make and save another alphabetic list. This will continue for as many "fill-ups" of the memory as needed or until the number range is finished. At the end, LISTS will merge all the smaller lists to make a master list for you. Please see section 9.5 for more details.

You might think that every name is saved only once, but this is not necessarily the case. In alphabetic lists it is often valuable to include married women under both their maiden and married names, for convenience in finding their record numbers when you use the list as an index. How a woman will appear in a list is controlled by the two parameters USE MAIDEN NAME and USE MARRIED NAME. If one or the other of these is set to YES, the woman's name will appear in that form, and if both are YES, she will appear twice. For example, Wendy McNair Sharpe could appear as "McNair, Wendy" or "Sharpe, Wendy McNair" or both depending on the parameters. This works for both alphabetic and numeric ordered lists, even though it is more useful in the alphabetic one.

If you change your mind about the list you requested while the names are being accumulated in memory, you can use **<CTRL Z>** to stop it and return to the main menu. The partial list will remain in memory and can be viewed or used from the Special Lists selection on the main menu. When you start another access choice, the partial list (or an old list that you are finished with) will be lost.

One other parameter affects what is saved in memory for the number range, number list, and entire diskette accesses. If the SHOW UNUSED RN's parameter is set to YES, any blank name found will be saved in memory and included in the final list produced. If the parameter is NO, these unused RN's will not be stored and won't occupy space in memory. You may want to use this feature to find the records you haven't used yet or to gain a better picture of how you have used a diskette. This parameter is probably more pertinent to numeric order lists but works for alphabetic as well. The list of unused RN's is forced to the end of the alphabetic list. Note that the EMPTIES utility can also be used to make lists of unused RN's; see section 13.6.

The only difference between alphabetic and numeric lists as finally output is the order of the names. The formatting and the parameters that control it affect both types of lists in the same way. The names in the numeric order list appear in the order they are found from your access choice. Alphabetic lists have the names ordered by surname.

After the names are all stored, LISTS will output the numeric list. The alphabetic list has to be alphabetized first, as described a little later. LISTS checks the SEND LIST TO PRINTER parameter to see where to send the list. If the parameter is NO, the list will be shown on the screen, and YES directs it to the printer.

If the list goes to the screen, you can control the speed of display. The means for doing this are the SCREEN SPEED parameter. If you set it at 100% of the possible speed, it will zip past, while at 1% it will seem related to the slowest of snails. We like it best in the 70% to 80% region ourselves. You can experiment to find your own speed by allowing the list to start at some speed, and typing **<CTRL Z>** if it is too slow or fast. You can then change the parameter and restart the list using the third item from the main menu (later sections give more detail on how to do this). You may need to do this more than once before arriving at a speed you like.

When viewing the list on your screen, there are no pauses to prevent scrolling because you can adjust the speed to be sure of seeing everything. However, at the end of the list you will see

PRESS ANY KEY TO CONTINUE

to prevent returning too rapidly to the main menu before you have seen the last few names.

Printed lists are made as rapidly as your printer can take the names, i.e. the speed parameter has no effect. There are some differences, however. The first is that a header will appear in front of the list. There is a standard header which indicates the type of list and date

prepared, or you may define your own header by setting the USE CUSTOM HEADER parameter and answering the questions (see section 5.4 for the questions used). Either type of header may be positioned horizontally using the TAB BEFORE HEADER parameter. There is also the SIZE OF LEFT MARGIN parameter which you can use for the obvious purpose.

An example of a numerically ordered list is shown in Figure 19. Each line first shows the record number for the person followed by the person's name. The name can be shown as first name then last name, or as last name first based on how you set the SHOW LAST NAME FIRST parameter. The names in the figure are grouped in sets of 5 for easy reading, and you can set that using the NAMES PER GROUP parameter. When the list is long, it breaks on the page according to the LINES PER PAGE parameter; the pages are numbered at the top right, as a part of the column header.

Now let's consider the wrinkles added by alphabetizing. After the names have all been stored in memory, there will be a pause while LISTS gets itself set up to alphabetize. You will see

PLEASE WAIT...
SETTING UP ARRAYS

on your screen. If you selected SHOW UNUSED RN's, the pause will be longer than otherwise while all the "empties" are moved to the end of the list. When alphabetizing starts, the message on your screen changes to

ALPHABETIZING NAMES

along with an estimate of how long it will take and an indication of progress being made. The time should be treated as an estimate only; the actual time depends on how well your names are sorted to start out with and on how similar they are to each other. Example times might be 2 minutes for 200 names or 4 minutes for 300 names.

Part of the display message is intended to help you gauge progress; this is the message appearing below mid-screen beginning 'BOX' IS ONE LESS THAN A POWER OF 2, etc. This might seem a bit confusing at first. Hopefully some explanation will clarify it. The message refers to the short display line in the lower right corner, which shows 'BOX=number' and which changes every so often. It would be nice to tell you that the sort was 3/4 done or something like that, but there's no way to do that. The sort divides the names into roughly equal size boxes, trades names between boxes, then divides each box in half and does the same thing again. The "Box=" message that you see is the size of a box. When the box size changes to 1, the sort is nearly finished. But on the other hand, the smaller the box, the longer it takes to finish the trading; on

NUMERIC LIST Jan 1986

RECORD NUMBER	NAME
11	HARBERG, CARL
12	MAYER, GOTLIEB FREDRIC
13	MAYER, ERNEST JACOB
14	SHAEFER, MINNIE
15	YEAST, ELIZABETH
16	BICE, WILLIAM HENRY
17	BICE, LAURA
18	COCHRAN, HARRIET
19	BICE, JOSIAH
20	MAYER, ESTHER JOSEPHINE
21	VORENBERG, WALTER
22	HARBERG, CAROLYN
23	VORENBERG, HARRY MATTHEW
24	JONES, HOWARD
25	VORENBERG, MARILYN
26	LAWLOR, JAMES
27	VORENBERG, JAMES DANIEL
28	MINGER, FREDERICK FLOYD
29	PHILLIPS, DOROTHY JANE
30	SORTORE, MR.
31	PHILLIPS, MR.
32	MEYERS, IDA MAE
33	RECTOR, MARY VIRGINIA (MOSS)
34	MINGER, FREDERICK GEORGE
35	RICKARD, MARY SUSAN
36	KRING, EVERITT
37	KRING, MINNIE ANN
38	KRING, JACQUELINE
39	RECTOR, ELIAS
40	MINGER, CHRISTIAN

NUMERICALLY ORDERED INDEX

FIGURE 19.

the average about 1/3 of the total sorting time has yet to be used when the change to BOX=1 occurs.

As an example if you had 215 names, you would see BOX start out at 127, change to 63 fairly soon, change to 31 after a longer delay, then 15, next 7, 3, and finally seem to take a while on BOX=1. After the delay on BOX=1, the printing will start. If your printer isn't ready, a reminder message will appear on the screen.

Almost everything in FAMILY ROOTS can be aborted using a CTRL-Z, but having that capability while alphabetizing extracts a price -- extra time. If you are willing to sacrifice the abort to get a faster sort, you can set the ABLE TO ABORT ALPHA parameter to NO. You will probably want to have it set to YES for lists of 200 names or less since the time difference will be very small. For longer lists you may save as much as 1/4 of the estimated time. With the parameter set to NO, the only way to stop is to press the RNN/STOP key. Use GOTO20000 to get back into LISTS.

An example alphabetic list is shown in Figure 20. As you can see, everything is similar to Figure 19 except for the order of the names in the list. The SHOW LAST NAME FIRST parameter can be used to affect how each name appears, and the Header and margin parameters also are applicable. The NAMES PER GROUP and the LINES PER PAGE affect how many names appear on each page.

It is possible to include one other field of your choice in an index prepared by LISTS. When you set the PRINT EXTRA FIELD parameter to YES, you will be shown a list of the field names and be asked to choose one. The question comes immediately before the list is printed. Figure 21 shows the same list as Figure 20 but with the birthdate included in a column at the right. Having the added information may help you to differentiate between people with similar names. A very common use of the extra field is to print your Special ID field on the list when you are using one (see section 3.5 for information about Special ID's). There is no way to order a list by the extra field. In some cases, printing an extra field requires more than 1 or 2 drives; you may not be able to print the extra field on some large lists.

After the list is complete, you will be returned to the main menu.

9.4 Making Special Lists

When you press <C> on the LISTS main menu, a new menu of 6 miscellaneous items appears. We'll refer to it as the Special Lists menu but you will note that not every item actually produces a list even though all are related to lists in some way. You can perform the following functions from here:

ALPHABETIC LIST Jan 1986

RECORD NUMBER	NAME
19	BICE, JOSIAH
17	BICE, LAURA
16	BICE, WILLIAM HENRY
18	COCHRAN, HARRIET
11	HARBERG, CARL
22	HARBERG, CAROLYN
24	JONES, HOWARD
36	KRING, EVERITT
38	KRING, JACQUELINE
37	KRING, MINNIE ANN
26	LAWLOR, JAMES
13	MAYER, ERNEST JACOB
20	MAYER, ESTHER JOSEPHINE
12	MAYER, GOTLIEB FREDRIC
32	MEYERS, IDA MAE
40	MINGER, CHRISTIAN
28	MINGER, FREDERICK FLOYD
34	MINGER, FREDERICK GEORGE
29	PHILLIPS, DOROTHY JANE
31	PHILLIPS, MR.
39	RECTOR, ELIAS
33	RECTOR, MARY VIRGINIA (MOSS)
35	RICKARD, MARY SUSAN
14	SHAEFER, MINNIE
30	SORTORE, MR.
23	VORENBERG, HARRY MATTHEW
27	VORENBERG, JAMES DANIEL
25	VORENBERG, MARILYN
21	VORENBERG, WALTER
15	YEAST, ELIZABETH

ALPHABETICALLY ORDERED INDEX

FIGURE 20.

ALPHABETIC LIST Jan 1986

RECORD NUMBER	NAME	BIRTH DATE
19	BICE, JOSIAH	--/--/1833
17	BICE, LAURA	03 Sep 1883
16	BICE, WILLIAM HENRY	07 Apr 1860
18	COCHRAN, HARRIET	14 May 1833
11	HARBERG, CARL	22 Nov 1863
22	HARBERG, CAROLYN	29 Feb 1896
24	JONES, HOWARD	30 Jun 1909
36	KRING, EVERITT	??/??/????
38	KRING, JACQUELINE	??/??/????
37	KRING, MINNIE ANN	??/??/????
26	LAWLOR, JAMES	08 Aug 1942
13	MAYER, ERNEST JACOB	28 May 1884
20	MAYER, ESTHER JOSEPHINE	17 Oct 1920
12	MAYER, GOTLIEB FREDRIC	10 Aug 1849
32	MEYERS, IDA MAE	??/??/????
40	MINGER, CHRISTIAN	??/??/????
28	MINGER, FREDERICK FLOYD	12 Sep 1894
34	MINGER, FREDERICK GEORGE	18 Jan 1866
29	PHILLIPS, DOROTHY JANE	??/??/????
31	PHILLIPS, MR.	??/??/????
39	RECTOR, ELIAS	13 Jun 1860
33	RECTOR, MARY VIRGINIA (MOSS)	31 Aug 1897
35	RICKARD, MARY SUSAN	18 Sep 1871
14	SHAEFER, MINNIE	28 Dec 1856
30	SORTORE, MR.	??/??/????
23	VORENBERG, HARRY MATTHEW	26 Nov 1916
27	VORENBERG, JAMES DANIEL	17 Dec 1940
25	VORENBERG, MARILYN	30 Oct 1944
21	VORENBERG, WALTER	14 May 1892
15	YEAST, ELIZABETH	25 Dec 1851

ALPHABETIC INDEX WITH EXTRA FIELD

FIGURE 21

a) merging two files containing alphabetic lists into a longer list

b) showing the contents of a (list) file from a diskette without saving all of it in memory (it might be too long to fit)

c) loading the contents of a (list) file from a diskette into memory

d) saving a list you just made to a diskette file

e) alphabetizing a numeric order list that's in memory (regardless of how it got there)

f) repeating the showing of the list in memory to your screen or the printer

Each of the above corresponds to one of the menu choices, and you may also press <P> to access the Change Parameters menu from here. The following sections describe each function in detail. In the following subsections, the word "file" refers to a list stored in a file on a diskette, while "list" implies a list of names, usually in the computer's memory.

9.4.1 Merging Alphabetic Files

An alphabetic list of names in the computer's memory is restricted in size to what will fit there. This depends on many things, but it is usual that only half of a diskette's worth of people can be alphabetized at once. The way you get a longer list is to alphabetize several separate lists, save each to a file on a diskette and then merge them two at a time to build the larger list. A merged list does not get saved in memory but must be directed to your screen, the printer, or a diskette, and you should set the parameters for this before starting -- see later. Directing it to a diskette is the means for constructing even larger lists, by merging it later with other such lists. Section 9.5 gives an example of making a large alphabetic list, showing the combination of selections and parameter choices needed.

Please consult section 9.4.4 on how to save a list to a diskette file. For this section you need to be aware that the diskette(s) used for this is a scratch one, i.e. this is not your usual data diskette, but is one used to store a list, probably temporary, and may have other "junk" on it. You can have LISTS format the scratch diskette if the ASK TO ERASE DISK parameter is set to YES. If that parameter is NO, you will need to have formatted the diskette (prior to starting LISTS) by using the procedure described in the 1541/71 manual. You may not want to have your scratch diskette erased if you have files you want to preserve on it.

In order to merge the alphabetic lists, LISTS needs to know where to find them, and what their names are. You will be asked

WHICH DRIVE HAS THE FIRST LIST (1-3)?

(in a 3 drive system), and, after you answer that

PLEASE PLACE YOUR SCRATCH DISKETTE INTO DRIVE 3.
PRESS ANY KEY WHEN READY

The file name is determined with

WHAT IS THE NAME OF THE FILE ON THE DIS-
KETTE THE LIST WILL READ FROM?

If you answer the "which drive" question with a **<'return'>** you are whisked back to the Special Lists menu. If you answer the "what file" question with a **<'return'>**, that's like saying "I don't remember the name," and you will be shown the list of files on the disk you selected. After that you are asked the last question again. What should your answer be? It should be the name of a file that you made up when you saved a list previously. For example you might have called it QUIGWORTHS when you made it, and should type that now.

After you do the above for the first file, you need to do the same for the second, i.e. say which drive to find it in, and the name of the file. It is O.K. if both drives are actually the same one with the same diskette, if that's how you saved the two lists from before. You might have both the QUIGWORTHS and WARTLEYS on the same diskette. If the drives are different for the first and second lists, you would get the request for insertion again. If you use the same scratch diskette for both files, LISTS won't ask for the diskette to be inserted for the second one.

Next the LISTS program checks to see that both lists are alphabetized. If either one isn't, you're told so with

NAMES IN LIST FOR WARTLEYS AREN'T ALPHABETIZED

with a quick hop back to the Special Lists menu for remedial exercises.

Two parameters affect where the merged list goes to -- if SEND LIST TO PRINTER is set to YES, that's one place it goes, and if NO, to the screen; while SAVE MERGES ON DISK directs the result to a scratch diskette. Both of these can happen at the same time. If you are saving to diskette, you must define where to put it in a similar manner to that

described above and in section 7.4.4. The destination for the merged list may be the same diskette as any of the sources, but the file name MUST be different. The input file will be destroyed if it has the same name.

When you are saving a merge to diskette, there may be added questions if you have the ASK TO ERASE DISK parameter set to YES. You would also see

```
IS IT O.K. TO ERASE EVERYTHING ON THE DISK
IN DRIVE 3 (Y/N)? <Y>

ARE YOU SURE (Y/N)?
```

before proceeding. This will let you use a fresh, out-of-the box diskette that hasn't been formatted, or will erase a diskette to be sure there is enough space for the task at hand.

The resultant list looks much like any alphabetic list, except it may be longer. (Nothing prevents you from using this for shorter lists too.) Like the alphabetic list generated in memory, you can affect the formatting, the inclusion of the standard or a custom header, and the inclusion of an extra field by setting the parameters appropriately. The parameters for selecting a woman's maiden or married name or both don't work here, since it is assumed you took care of this when you did the original alphabetizing of each of the files before merging.

9.4.2 Showing a File from Diskette

You use the second choice on the Special Lists menu to review or print a list of names that you previously saved in a diskette file with either the LISTS (see 9.4.4) or the SEARCH (see 10.3) program. If you are displaying it, this gives you the chance to examine the list before trying anything else with it, and you can produce extra printed copies of an older list by directing it to the printer. The destination is controlled by the SEND LIST TO PRINTER parameter.

When you choose this option, you must specify where the list is to be found and what its name is, the same as for other operations with lists on diskettes. You will first see

```
WHICH DRIVE IS THE LIST TO BE
READ FROM (1-2)? <2>

PLEASE PLACE YOUR SCRATCH DISKETTE INTO DRIVE 2.
PRESS ANY KEY WHEN READY
```

The file name is determined with

```
WHAT IS THE NAME OF THE FILE ON THE DIS-
KETTE THE LIST WILL BE READ FROM?
```

If you don't remember the name, you may press **<'return'>** and you will be shown what is on that diskette, with another chance to answer the question. If you want release from this apparent trap, answer **<CTRL-Z>**.

The list now spews forth from said diskette for your viewing pleasure until it is finished or until you've seen enough and end it with a **<CTRL-Z>**. If you're watching it on your screen, you can change the viewing speed using the SCREEN SPEED parameter. If you are putting it on the printer, the usual formatting parameters work, but you can't select which form of a woman's name is used.

9.4.3 Loading an External File

You can use the third choice on the Special Lists menu to load a list from a diskette file into memory. You would use this to load and then alphabetize a list of names previously saved to diskette, which is especially useful if the list was the result of some work using the SEARCH program. You could also use a list previously saved by LISTS. The size of the lists which this option will accommodate is obviously limited to what will fit in your computer's memory. LISTS will tell you soon if this particular list is too big.

As with other scratch diskette manipulations for files containing lists of names, you must specify which diskette to find it on, and the name of the file. You will see

```
WHICH DRIVE IS THE LIST TO BE
LOADED FROM (1-2)? <1>

PLEASE PLACE YOUR SCRATCH DISKETTE INTO DRIVE 1.
PRESS ANY KEY WHEN READY
```

Next comes

```
WHAT IS THE NAME OF THE FILE ON THE DIS-
KETTE THE LIST WILL BE LOADED FROM?
```

with the legal answers being an existing file name, **<'return'>**, or **<CTRL-Z>**. The results are the same as noted in the previous section.

When your list is loaded you can do anything with it that you can do with any other list in memory. This includes saving it to diskette, alphabetizing it (if it isn't already), and sending it to your screen or printer. LISTS knows whether the list is alphabetic or not and will tell you if you try to do something you shouldn't.

9.4.4 Saving a List to a Diskette File

You would use the fourth choice on the Special Lists menu to save a list of names in memory to a file on a diskette. You might do this to preserve a list you just made, or to merge it with other alphabetic lists to form larger ones. You might preserve a list because you need the convenience of making extra copies on your printer easily in the future or because you need a record of the state of your data at some particular date.

The diskette upon which the list is to be saved must be a scratch one, i.e. not one of your numbered data diskettes. You can have LISTS format the scratch diskette if the ASK TO ERASE DISK parameter is set to YES. If that parameter is NO, you will need to have formatted the diskette (prior to starting LISTS) by using the procedure described in the 1541/71 manual. You may not want to have your scratch diskette erased if you have files you want to preserve on it.

You should not put lists onto your numbered data diskettes because there is not enough space both for this and the standard data. If you accidentally save a list to one of these diskettes, you should erase this file (not the whole diskette) using

```
OPEN 8,8,15
PRINT#8,"S0:JUNEBUGS"
CLOSE 8
```

from the "Ready" prompt, where JUNE BUGS is the name you chose to save it to as described below. While a list may seem to fit on a numbered data diskette if you accidentally put one there, you will likely have problems when you try to use that diskette later for the regular data. Save yourself problems -- erase the problem file first.

You can save any list that is stored in memory. It may have arrived there through some effort on your part using the main menu selection A or B, or you might have loaded it from a file on another (or the same) diskette. It's not ridiculous to do that last thing -- you might have loaded a list generated by SEARCH, then alphabetized it, and finally needed a magnetic copy for future reference.

After you press <D> on the Special Lists menu, you will see

```
WHICH DRIVE IS THE LIST TO BE
SAVED TO (1-4)?
```

where the number of drives will be as you set it for your system using the MANAGER. You will be prompted to insert a diskette with

```
PLEASE PLACE YOUR SCRATCH DISKETTE INTO DRIVE 3.
PRESS ANY KEY WHEN READY
```

If you have the ASK TO ERASE DISK parameter set to YES. You would also see

```
IS IT O.K. TO ERASE EVERYTHING ON THE DISK
IN DRIVE 3 (Y/N)? <Y>

ARE YOU SURE (Y/N)?
```

before proceeding. This will let you use a fresh, out-of-the box diskette that hasn't been formatted, or will erase a diskette to be sure there is enough space for the task at hand. The next question provides a name for the file on the diskette as follows:

```
WHAT IS THE NAME OF THE FILE ON THE DIS-
KETTE THE LIST WILL BE SAVED TO?
```

The name you supply can be any characters, limited to 16 in length. Legal names chold be A12 BAR ONE or AS2ONEZY or HITHERE. We suggest you choose a file name that is indicative of the purpose of the list, since it may be preserved for a while, and may be difficult to remember later. For example a name could be

```
PARMWORTS SNDX
```

It is O.K. to give a name of a file that already exists on the diskette, but the old contents of the file will be lost if you do that. If you need to see what's on the diskette before saving onto it, press <'return'> in response to the "file name" question,and you will be shown its contents, followed by the question again. If you need to escape this, press <CTRL-Z>.

After the second question, the list is saved and you are returned to the Special Lists menu. Two indicators are saved with each list -- one that shows whether the list is alphabetic or not, and another says how many names there are. These are used when you try to load the list into the computer again using one of the other Special Lists choices.

9.4.5 Alphabetizing an Old List

The fifth choice on the Special Lists menu will cause a numerically ordered list of names that is saved in memory to be alphabetized. No display or printing of a list results from this selection. This choice could be used in at least two ways. If you went through a search of the list of names and wanted both a numerically ordered printout and an alphabetic one as your result, you would probably use item B on the main menu to generate the first list, then alphabetize and print it with this choice. (The alternate method of searching twice would take longer.) Another possibility might be that you generated a list of names as a result of searching people's records with the SEARCH program (which is never alphabetically ordered) and you wanted that list alphabetized before printing.

Once you make this menu choice, the result is the same as if you had selected the generation of an alphabetic list from the main menu, but without the search for names. This starts with the

```
PLEASE WAIT ...
                SETTING UP ARRAYS
```

display and continues as described near the end of section 9.3. Please see that section for further details.

9.4.6 Repeating a List

The sixth choice on the Special Lists menu is for making a printout or viewing a list of names which resides in the computer's memory. The list may have gotten there by a search you just did, or may have been read in from a diskette as described in section 9.4.3. The list may be in alphabetical or numerical order, and LISTS knows which it is. This option is used when you want extra copies of a printed list or when you want to reexamine a list on the screen. If you have not just made a list or have not read anything from diskette, there will not be anything in memory to view, and LISTS will tell you so.

After making this choice, it happens. The formatting parameters are pertinent for the printer output, and the screen speed parameter affects the speed of display. Pressing **<CTRL-Z>** aborts the whole thing and returns you to the Special Lists menu. Details on the effects of the parameters may be found in sections 9.3 and 9.6.

9.5 Making Large Alphabetic Lists

Making alphabetic lists that are too large to fit into the computer's memory may involve several different menu selections and intermediate alterations of the parameter settings. This section gives two examples

of making large lists. In the first, the list is constructed manually, while in the second the list is made using the MERGE AUTOMATICALLY parameter.

Making a large list manually. Let's make a number of assumptions for the purpose of our example. Let's say you have a computer with 2 disk drives. We'll say that we want to make a list of the names from standard data diskettes number 1, 3, and 4. This might happen if we didn't have a diskette #2 or if it contained names from a different family we didn't want to include in the list. Let's also assume you have already started LISTS and its main menu is showing on your screen.

Here are the steps you would follow to make that list:

a) Select <D> in order to change a parameter. This results in the menu of parameters showing on the screen.

b) Set parameter F to NO. This will prevent the smaller lists we make from being printed and wasting our paper. (Several small lists will be made and merged to construct the large list we want.) Set parameter W to YES. This will allow the scratch diskette to be formatted.

c) Press 'return' to get back to the LISTS main menu. Insert data diskette #1 into drive 2 (if it's not there), and press <E> to check diskettes. This lets LISTS find the diskette.

d) Select <A> to make an alphabetic list.

e) Select <F> from the access menu to make a list of the whole diskette.

f) LISTS will now go though all the steps described in section 9.3. Eventually, the list will start being displayed on your screen. Stop it by pressing CTRL-Z. This brings back the LISTS main menu.

g) Select <C> to get to the Special Lists menu.

h) Select <D> from the Special Lists menu to save the list into a diskette file. You will be asked the questions described in section 9.4.4. Put a scratch diskette into drive 1, and let the files be erased. When it asks for a name, let's use LIST1.

i) The list will be saved into the file LIST1 on the scratch diskette and you will be left on the Special Lists menu. Press 'return' to get back to the LISTS main menu.

j) Insert data diskette #3 into drive 2 and press <E> for "check diskettes. Repeat steps d through i, but use the name LIST3. Don't erase the scratch diskette this time, and please do use the same diskette as before (it is still in the drive).

k) Insert data diskette #4 into drive 2 and press <E> to let LISTS know it is there. Repeat steps d through i, but use the name LIST4. Use the same scratch diskette as before and don't erase it.

l) Now we want to start merging, but we need to change a parameter before starting. Select <D> to get the menu of parameters. Set parameter G to YES so that the result of our merge will be saved to a file on the scratch diskette.

m) Press 'return' to get back to the LISTS main menu, and select <C> for the Special Lists menu. Press <A> from the Special Lists menu to do a merge.

o) The questions described in section 9.4.1 will be asked. All of our operations will involve the scratch diskette that's already in drive 1 -- answer all the "which drive" questions with 1. When it asks the name of the first list, use LIST1; for the second list answer LIST3. When it asks for the name of a file to save the merge in, answer LIST99. That's a new file name we just made up and could be anything you wanted that fit the file naming restrictions.

p) The merging operation will now start. You will see the merged list being displayed on your screen. Do not interrupt it with CTRL-Z. The merged file is being saved on the scratch diskette at the same time as it is being displayed; interrupting it would cause some of the names to be omitted from your large list.

q) When that finishes, you will see the Special Lists menu again. We have now made all the smaller lists that we need and are ready to make the final list. In order to print it, we need to set the parameter. Select <P> from the Special Lists menu to get the menu of parameters, and change parameter F to YES. Also change parameter G to NO, since we don't need to save the result of the final merge (you may do so if you wish, however). Press 'return' to get back to the Special Lists menu.

r) Select <A> from the Special Lists menu to merge two files. Again, they are all on the same scratch diskette in drive 1. The file names for merging are LIST4 and LIST99. You won't be asked for a third name since you set the SAVE MERGES ON DISK parameter to NO.

s) The final large list should now be appearing at your printer.

Making a large list automatically. Most, but not all large lists can be made automatically. The automatic merging method assumes that all intermediate lists will fit on a single scratch diskette. It also assumes that the list is being constructed from a contiguous set of RN's. That means it would only work based on one choice from the access menu -- number range, number list, etc. In particular, note that the large list made manually in the above example could not have been done completely automatically, because diskette #2 was skipped.

Let's see what making a list containing all the names from data diskettes #2, 3, and 4 would entail. Let's also assume that there is space for 400 people per diskette, and that you have a blank diskette ready. We'll also let ourselves already be at the LISTS main menu to save some steps.

Here's what you would do:

a) Select <D> to get the menu of parameters. Set parameter F to YES to direct the final list to the printer. Set parameter S to YES to cause automatic merging. Press 'return' to get back to the LISTS main menu.

b) Select <A> to make an alphabetic list.

c) Select <A> from the access menu to specify a number range. Give it a start number of 401 (the first record number on diskette #2) and an end number of 1600 (the last record number on diskette #4).

d) Watch the screen to see what's happening. You won't need to do anything except insert the scratch diskette when it asks for it. You will be asked whether you want to erase the diskette regardless of the setting of the ASK TO ERASE DISK parameter. Names will be loaded into memory until the memory is full. Then it will alphabetize the list, and save it on the scratch diskette using the file name SLIST1.

   It will then resume loading names from where it quit before, make another alphabetic list, and save it using the file name SLIST2. Let's assume there are still more names and it will need to generate a third list called SLIST3 (it might actually finish without having to do this).

   Next it will automatically merge the SLIST1 and SLIST2 files to make a new file SLIST4. Finally it will merge files SLIST3 and SLIST4 to print your final list.

9.6 Changing Program Parameters

There are twenty-four parameters used by LISTS that affect printing, display, and diskette usage. A value is normally assumed for each of these, making it unnecessary to set them when you're first learning how to use the program. The assumed values can be changed using the MANAGER program.

There is a menu and procedure for changing each parameter. The menu can be accessed by selecting D from the main menu or by pressing 'P' from any other menu in LISTS. The menu shows a brief title for each parameter and its current value, followed by a question about which you want to change (by letter). The procedure for changing parameters in LISTS is the same as for the other FAMILY ROOTS programs, and you may wish to refer to the other similar sections for more description. Many of the parameters are identical as well. The following paragraphs describe each parameter:

a) FIRST VISIBLE PARAMETER. This parameter's value is a letter between B and Y. It affects how the CHANGE PROGRAM PARAMETERS menu (the one you're looking at now) appears. The reason for this parameter is that there are more program parameters than there are lines on the screen to show them. You can see a different selection of them by resetting this parameter. The starting value is always B, which means you can see parameters B through P on the screen in addition to A (always present). As an example, if you set this to M, you will see parameter A plus M through Y on the screen. The default value of the 'First Visible Parameter' isn't available for resetting via MANAGER. Don't worry about pressing an illegal letter on this--LISTS won't change anything if you do.

b) TOP-OF-FORM AFTER PRINTS. This is normally set to YES. When it is YES, the printer will move the paper to the top of the next page when it is finished with the last printout. If it is NO, no extra paper movement will occur. This is used to conserve paper if you wish.

c) SIZE OF LEFT MARGIN. This is the number of spaces used for the left margin, and is normally 10. The actual width in inches depends on the character size you are using, set using the PRINT SIZE parameter. You would use this to allow space for binding.

d) USE CUSTOM HEADER. This is normally set to NO. When it is NO, the standard header showing type of list and date will be printed. When it is YES, you will be asked a series of questions to define the header you want printed. Please refer to section 5.4 for the details on how a header is defined.

e) TAB BEFORE HEADER. This is the number of spaces used in front of any header, a standard one or otherwise. It is normally 10 spaces. You would use this to position a header to the right or left of the page for ease of viewing when bound.

f) SEND LIST TO PRINTER. This is normally set to YES. If it is YES, your list of names is directed to the printer. If it is NO, the list can be viewed on your screen. You might use this parameter to store a list in memory and view it before deciding whether you wanted a printed version of it. The result of this setting may be modified by how the PRINT TO DISKETTE parameter is set.

g) SAVE MERGES ON DISK. This parameter affects only the results of merging two alphabetic lists. Lists in memory are saved to diskette by menu selections as described in section 9.4.4. The parameter is normally set to NO. When it is NO, merged lists are directed only to your screen or printer. When it is YES, merged lists are also saved to a scratch diskette file of your choice (see 9.4.1 and 9.5). You would use this parameter to create a larger alphabetic list on diskette to use in additional merging operations.

h) USE MAIDEN NAME. This is normally set to YES. When it is YES, a woman's maiden name will be included in an alphabetic or numeric list made by searching the names on your data diskettes. In alphabetic lists the name will be placed in the list according to the Last Name at Birth. When the parameter is NO, a woman's married name will be used. This parameter works with the next one and they are not independent. If one or the other of them is set to YES, then that form of the woman's name is used. If both are YES, then both forms are used. And if neither are YES, the married name is used. If a woman is not married, these two parameters have no effect.

i) USE MARRIED NAME. This is normally set to YES. When it is YES, the married form of a woman's name will be included in a numeric or alphabetic list made by searching the names on your data diskettes. In alphabetic lists, the name will be placed in the list according to its Married Last Name portion. When it is NO, only the Maiden Name form may be used, but it depends also on the previous parameter. See paragraph h).

j) SHOW UNUSED RECORDS. This parameter is normally set to NO. When it is YES, unused records that satisfy your search access criteria (i.e. within a number range, for a number list, or for a whole diskette) will be included in the numeric or alphabetic list. In numeric lists they appear in the order accessed, while in

alphabetic lists they are moved to the end. When the parameter is NO, unused records are discarded when they are found, and will not appear in a list. You are likely to use this parameter set to YES to create a printed numeric list to use in filling in the empty spaces. For example, it is very convenient to have such a list while you are adding names using EDIT, and to jot each name onto the paper as a temporary reminder as you work.

k) SHOW LAST NAME FIRST. This is normally set to YES. When it is YES, a person's last name will appear first, followed by a comma, then the first names and Title. If a woman's married name is used, the Last Name at Birth appears between the first names and Title. When the parameter is set to NO, the first names come first (amazing!), then last name(s) and finally title. Your choice here is mostly a matter of preference. We find it more natural to see a list that was alphabetized have the part of the name that was mainly used for that appear first.

l) SCREEN SPEED (1-100%). This is used to affect how speedily a list of names is displayed on your screen if that's where you're looking at it. If you are printing your list, this parameter has no effect (see paragraph f). It is normally set to 100, which is the fastest possible, and a number in the 70 to 80% range may be a good value to choose. You may type the % or not -- it has no effect.

m) ABLE TO ABORT ALPHA. This is normally set to NO. When it is NO, an alphabetization in progress can be aborted by typing **<CTRL-Z>** on your keyboard. When it is YES, you will not be able to abort an alphabetization except by reset or power off. The parameter may be used to speed up the alphabetization of long lists, but will not have any appreciable effect on short ones.

n) SEARCH TITLE WITH SOUNDEX. This is normally set to NO. When it is YES, the Title part of each name examined using the Soundex (see 9.2) will be checked to see if it sounds like the surname you supplied. This is provided in case you used the title as a place to put alternate surname spellings (optional). When it is NO, the Title is not checked by the Soundex.

o) IGNORE UPPER/LOWER CASE. This is normally set to NO. When it is NO, the search for names with the Name Set and Surname Partials accesses (items C and E on Access Menu) will use name parts exactly as you supplied them, e.g. DeVoe is different from Devoe. When the parameter is set to YES, upper and lower case forms of the same letter are treated the same, i.e. DeVoe is the same as Devoe. You might need this if you entered names using a mix of upper and lower case or if your family names exhibit such variations. It takes considerably more time to find the names with the parameter set to

YES, rather than NO. The parameter has no effect on Soundex searches, which are always done as if this parameter were YES.

p) NAMES PER GROUP. In the printing and display of lists, the names are grouped to make reading the list easier. The normal number of names in a group, as controlled by this parameter, is 5. Legal values are zero or anything larger. No grouping occurs when the value is set to zero. Your choice on this is mostly a matter of personal preference; in addition, a small amount of paper might be conserved with no grouping.

q) LINES PER PAGE. This is a number between 0 and 66, and is normally set to 55. The next page will be started when approximately this number of lines has been printed. In the case where the number of names in a group hasn't finished printing by the time the page limit is reached, the group will finish anyway (unless you set NAMES PER GROUP large). In other words, in case of conflict, the NAMES PER GROUP wins. Setting the LINES PER PAGE to zero means that the printing will be continuous, with no break.

r) PRINT EXTRA FIELD. This has a default of NO. When it is NO, only the record numbers and names are included in a list. With it set to YES, you will be asked which field you want to include. Only one such field may be included, and it can't be a person field. The usual use of this parameter is to include some piece of information to help differentiate between individuals with similar names. The extra field would often be a birth date or a special ID. It can be either displayed or printed. Since there is extra retrieval involved in doing this, making a list with an extra field will take longer than without it. Many large lists require two or more drives before an extra field may be included.

When you have this parameter set to YES, you will be asked for the extra field just before the printing or display starts. You would be shown a list of all the allowable fields. Since this will include the fields you defined for yourself, we can't show you exactly how it would look. An example would be

```
WHICH FIELD DO YOU WANT ON THE LIST:

A) BIRTH DATE
B) BIRTH PLACE
C) DEATH DATE/'LIVING'
D) DIED/LIVING AT
E) SEX
F) OCCUPATION

CHOICE (A-F)?
```

You would make your choice by pressing the letter showing in front of the preferred field. If you change your mind and don't want the extra field, answer with CTRL-Z; the list will still be printed.

s) MERGE AUTOMATICALLY. This is normally set to YES. It will have no effect if the memory space isn't exhausted while generating your list. When it is YES and the result of your access selection exhausts the available memory space, intermediate lists will be automatically saved to files on a scratch diskette and then merged to make the list you requested. When it is set to NO, there isn't any attempt made at merging -- it will quit accumulating names in memory when the space is used up. Please see section 9.5 for some restrictions and an example.

t) PRINT SIZE. The default is 10 characters per inch. A normal range of values might be 8 to 17 char/inch. If your printer can't change character size, this parameter has no effect.

u) ASK TO ERASE DISK. This is usually set to YES. When it is YES, you will be asked if you want to erase any scratch diskette before it has anything saved to it. Erasing a diskette will assure that the maximum amount of space is available for the following procedures. A diskette is erased by formatting it. When the parameter is set to NO, the scratch diskette is assumed to have been previously formatted, and no question is asked. You may wish to preserve previous files saved on a scratch diskette. This parameter doesn't determine whether a diskette will be formatted or not, only whether you will be asked about it.

v) FIRST SHEET NUMBER. The default is sheet number 1. Sheet numbers will appear on your lists at the right on the top of each page starting with the second page. This occurs only when you have asked that the list be broken at the page boundary, rather than running continuously, as controlled by the LINES PER PAGE parameter. If you set the parameter to 0, no sheet numbers will be used. You might set this parameter if you wanted to include a list in a book.

w) USE MONTH NAMES. This is a YES/NO parameter. It is normally set to YES. When it is set to YES, the three character abbreviation for the month is used in printing all dates where this is possible. An example date of this type is 13 Jun 1926. If it is set to NO, the date is printed with all numbers using the familiar slashed format. In this case the order of the day and month depends on the value you selected for DAY/MONTH ORDER in the MANAGER program. An example of this format would be 25/06/1922 in the order day-month, and 06/25/1922 in the order month day. The standard order for

genealogists is day-month. Imprecise dates such as About 1850 are printed exactly as stored, and are not affected by this parameter. This parameter has an effect only when the extra field included with a list is a date.

x) COLUMN FOR EXTRA FIELD. This is the starting column number, e.g. 70, at which the extra field will start to print or display, whenever you have set the USE EXTRA FIELD parameter to YES. With its default value of 0 (zero), LISTS will compute the starting column at about 70% across the page as defined by your paper width and print size settings.

y) DATE. The date is used in the standard headers for the two types of lists. If you want a date in a header you define, you must put it there. The date is obtained from your answer to the date prompt upon starting, if you are using that feature. When you change the date here, that will not have any effect on the other programs.

9.7 Checking Diskettes

You should not switch diskettes in your disk drives unless told to do so or unless you are at the main menu. On the main menu you must select CHECK DISKETTES by pressing <E> after you switch, so that LISTS can find out where and what everything is. Elsewhere in LISTS you may be told

```
PLEASE PLACE DISKETTE NUMBER 1 INTO DRIVE 2
PRESS ANY KEY WHEN READY
```

which is an appropriate place to switch diskettes as directed.

The usual strictures about possibly destroying data and making backups discussed in other similar sections apply (5.5, 6.5, etc.) The technology doesn't yet support having your hands slapped by a mechanical contrivance that emerges from your screen.

9.8 Exiting LISTS

When you select <F> or type <**'return'**> on the main menu, you will see the exit menu. The choices are exactly the same as described for EDIT in section 4.7, which you may reread if you need refreshing.

9.9 Miscellaneous Information on LISTS

Several of the items on EDIT discussed in the miscellany section 4.8 are valid here too. Please reread that section if you need to. The items that pertain to list generation and manipulation are:

a) Any questions may be answered with a **<'return'>**.

b) CTRL-Z aborts any operation in progress, with the exception of alphabetizing if you have set a parameter to disallow the abort.

c) GOTO 20000 usually gets you back into LISTS after an error.

(De-whited on purpose.)

10. DETAILED USE OF SEARCH

The SEARCH program searches through the records you created (using the EDIT program) looking for whatever information you have selected. There are five types of searches which, when used singly or combined, enable you to find records satisfying almost any search criteria you wish. Use of SEARCH won't be very useful until you have a considerable number of records, although you may use it even when there is only one record.

In order to get started with SEARCH, you can boot as described in section 3 and choose SEARCH from the programs menu, or you can get the programs menu after having run one of the other FAMILY ROOTS programs. After your choice the drive will whirr while SEARCH is loaded, followed by a message like

PRESS ANY KEY WHEN YOUR DATA DISKETTES ARE IN THE DRIVES

Be sure that at least one data diskette is present and that there is some diskette in every drive. When you press a key, SEARCH will check every drive to find the location and identity of each diskette.

10.1 General Principles for Search

When SEARCH is ready you will see the main menu with the following choices:

A) PERFORM A SEARCH
B) OUTPUT SEARCH RESULTS
C) CHANGE PROGRAM PARAMETERS
D) CHECK DISKETTES
E) EXIT

We need to discuss in general what happens when you do a search before dealing with the specific types of searches.

Each time you set up a search, you are asked to define

a) what to search for (the character, data, etc.)
b) where to search for it (what fields)
and c) which records to search (what people)

SEARCH then methodically proceeds to look in the fields of every record you selected to see if what you're looking for is there. When it finds something, the person's RN is saved in memory and the name is shown on your screen. After the search is completed you are returned to the SEARCH main menu.

Note that the result of your search is a list of names stored as RN's in the computer's memory. In order to preserve or view the list you must specifically choose to output it, i.e. display it, print it, or save it on a diskette. If you want to examine the records to see what was found, you must run another of the FAMILY ROOTS programs to do so, but the list will still be available in memory after moving to the other program, making that a simple matter. You may save the list on diskette and load it into the LISTS program to alphabetize or print it nicely. And the list remains in memory to be used as the choice of records for more searches.

Only the records having non-blank names are searched, in order to save time just in case you have a lot of unused records. Also you can stop the search after it has begun by typing CTRL Z, which you might do if you found what you were looking for or if you made a mistake in setting up the search. When you abort a search the names saved thus far are preserved for output or further use.

Let's examine the implication of reusing a list in memory for another search. Each of the five searches available is an OR search. This means that you can specify a large number of items to look for on any one pass through the records, and if any ONE of the items is found, the record is said to have satisfied the search. You do AND searches by specifying searching for one value, then reusing the results to search for another value, and so on until you're finished. This type of search means that the records found must satisfy ALL of the criteria you set up, not just ONE.

An example may clarify this. Suppose you wanted to find everybody who was born in LAS VEGAS and died in CALIFORNIA between 1960 and 1970. You would first set up a search of all the records for "born in Las Vegas". All the records would be searched and several would be found; the numbers for those would be saved in the computer's memory, say 13, 27, 59, 81 and 428. You would then set up another search for people who "died in California". You instruct the program to search only the five record numbers saved from the last search. Suppose three of those satisfy the search, 27, 59 and 428. Finally you set up a search for "people who died between 1960 and 1970". Again you specify to the program to search only the three records whose numbers were saved, and only one record satisfies your search, number 59. You can output that number to your printer, the screen, or a diskette; or you might move to the EDIT program to change the record; or you might use PERSONS just to see what's there.

The actual search of records can take a while since many records are usually retrieved and examined. Typically about 1/2 second would be needed for each record searched. If you watch your display, you will see a message showing what record is being searched. When a record is

found to satisfy your criteria, the name is displayed.

The following sections describe the five types of searches in detail, followed by a discussion of how to output the results and what that looks like. After that comes a description of the parameters available in SEARCH.

****

Note that if you want to search the list of names, you should use LISTS program rather than SEARCH. For example, you would use LISTS to find all people with the surname INSECTOIRE. But you would use SEARCH to find all records in which JULIAN INSECTOIRE appeared as the father.

****

10.2 Performing Searches

You initiate a search by selecting <A> on the main menu. The result of that effort is another menu, which we'll call the SEARCH menu, that gives you the option of one of five types of searches:

A) SEARCH CHARACTER STRINGS
B) SEARCH DATES
C) SEARCH FOR NAMES
D) SEARCH FOR NUMBERS
E) SEARCH FOR EMPTY FIELDS

When you make one of these choices, you are asked to specify which fields to search and what values in those fields are of interest. Subsequent sections describe in detail how to answer the questions and what the results are.

After you select the fields and values of interest, you choose the records using the usual access menu that was described in section 4.3.1 for EDIT. The menu choices are exactly the same and the results are nearly the same, but modified by one of the parameters, IGNORE UPPER/LOWER CASE. When you do a Name Set search, you can require that the name you supply must match what's found exactly, or you can have the difference between upper and lower case of the same letter ignored. Examples of the effects of this parameter may be found in the similar discussion for LISTS, section 9.2. For further details on the access choices and how they work, please refer to section 4.3.1. Note that the menu choice

LIST IN MEMORY

does not appear unless there is a list present.

10.2.1 Searching for Character Strings

You choose to search for character strings by pressing <A> from the SEARCH menu. You will first select which fields you want to be searched

in each record and then you choose the character strings to be found. The search is for embedded strings, e.g. if you're looking for YORK, then YORK, NEW YORK, and YORKY would all satisfy the search.

The IGNORE UPPER/LOWER CASE parameter affects the results of the search. If the parameter is set to NO, New York and NEW YORK are considered to be different because, for example, the "e" and the "E" are distinct. Conversely, with the parameter YES, those two forms would be the same. Your choice of which to use depends on how you entered your data and on how long you're willing to wait -- the search with the parameter set to YES takes much longer. It may often be faster to include both (or multiple) forms to search for, rather than using this parameter. For example, searching for New York, NEW YORK, New YORK and NEW York is faster than using one of them and asking that upper/lower case differences be ignored.

You are first shown a list of all the fields you can choose. You select up to 10 of these by number. (You can increase that limit using the MANAGER.) After you choose 10 fields the program will proceed automatically to the next step, or you may select fewer by pressing **<'return'>** in answer to the question, e.g.

```
WHICH NUMBER?  <5>
NEXT NUMBER:   <'return'>
```

All field names are shown in this list of fields, including the ones you defined yourself and the auto date field if you are using it. There is some redundancy between this list and the other possible types of search, but you should note that the searches are done in different ways. In particular if you search a date field as a character string you may get some unexpected results if you're not careful (e.g. searching for 11 would give positive results for 11 April 1918, 1 November ????, 3 March 1911, or 4 January 1762).

If you choose to search any one of the fields related to marriages, then all fields of the same type are searched. Thus if you chose **<'9'>** for PLACE(S) OF MARRIAGE, there would be one field checked when there is one marriage, two checked when there are two, and so forth. If the search results are positive you will probably want to examine the record further.

Once you have selected your fields, SEARCH shows you the list you have chosen and gives you a chance to do it again, in case you made a mistake. If you answer **<N>** to

```
OK TO CONTINUE?
```

then you begin again. If you answer anything else (usually 'return')

you will proceed to the next step. This philosophy for answering these confirmation questions is general and consistent, i.e. it is assumed everything is OK unless you say it isn't.

The next step is to pick up to 10 character strings to search for. You type each string of interest then press 'return'. When you have enough, answer with only the **<'return'>**. The program again asks you for confirmation by showing you your list. If you reject it you return to select the entire list of strings again.

Once you have verified all selections, the program displays the access menu. At this point you may want to press 'P' to change parameters (you will return to this point when you finish), before you make your record access selection. The parameters that have any effect for this search are USE LAST NAME FIRST and SHOW MARRIED NAME for the display of names found, and IGNORE UPPER/LOWER CASE for the Name Set access.

An example of a complete selection could be as follows:

```
WHICH NUMBER:          <2 'return'>
NEXT NUMBER:           <4 'return'>
NEXT NUMBER:           <'return'>

YOU HAVE SELECTED:

2)   PLACE OF BIRTH
4)   PLACE OF DEATH/LIVING

OK TO CONTINUE?        <'return'>

PICK UP TO 10 EMBEDDED CHAR-
ACTER STRINGS TO SEARCH FOR IN:

2)   PLACE OF BIRTH
4)   PLACE OF DEATH/LIVING

FIRST STRING:          <BOSTON>
NEXT STRING:           <CHARLESTOWN>
NEXT STRING:           <NEWTON>
NEXT STRING:           <WALTHAM>
NEXT STRING:           <'return'>

SEARCH CHARACTER STRINGS WILL BE:

1)   BOSTON
2)   CHARLESTOWN
3)   NEWTON
4)   WALTHAM
```

OK TO CONTINUE? **<'return'>**

As described in 10.1, the results of the search are names and numbers output to the screen and saved in memory.

10.2.2 Searching on Dates

You choose to search dates by pressing **<B>** from the Search menu. You are then faced with a decision on one of three different types of searches:

A) A RECORD DATE BETWEEN TWO YEARS
B) A YEAR BETWEEN TWO RECORD DATES
C) APPEARANCES OF MONTH/DAY

where "date" refers to something in a record and "year" means a number you will supply.

An example of the first type would be a search for "everybody born between 1775 and 1850". You would use the second for "everybody alive in 1863" or "everybody married after 1927". You would use the third to find everybody born in a certain month or certain day, e.g. "everybody born in March" or "everybody who was married on June 6". Note that if you want to search for a specific date including year, you should use the search on character strings.

For searches of month/day (third menu choice), only dates in the standard format (see 4.3.4) are examined; the others are ignored. For the first two menu choices, dates in the standard format are the only ones examined when the FIND APPROXIMATE YEARS parameter is set to NO. With the parameter set to YES, date entries like "about 1833" will give positive results if they satisfy your criteria. However, searching for approximate entries can produce erroneous finds; it would find something like "not 1833" as well. From another viewpoint, this should caution you to be consistent in the way you enter approximate dates if you expect to do searches for them.

After you make your choice on type of search the general sequence of questions is similar to 10.2.1 but the specific choices are different. You will first be asked the fields you want to search, followed by the values you want to search for. The three standard date fields are always

1) DATE OF BIRTH
2) DATE OF DEATH OR 'NOW'
3) FIRST VALID MARRIAGE DATE

plus the Auto Date and any date fields you defined for yourself.

You select the dates by typing the number in front, i.e. 1, 2 or 3 in the above list, and perhaps 4 or 5 if there are more shown to you, followed by a 'return.'.

10.2.2.1 Searching for Record Date Between Two Years

When you choose this option, you can select any or all of the date fields for searching. You end your selections by answering only **<'return'>** in response to the questions. After you make your selection, you are given the chance to start again in case of errors.

Next you must supply two years. When the search starts, each field you have chosen will be checked to see if the year in the date stored there lies between the two years you supplied, including those two years. You must supply exactly two year values -- you are returned to the main menu if you don't (under the assumption that you changed your mind). The year values must be exactly 4 digits long; if you need a year less than 4 digits, use preceding zeros (we're jealous!).

If you want to search for exactly one year, you should choose both your year values the same. After you've chosen your two years, you're given the chance to verify or do it again.

After you make your access choices, the search begins.

10.2.2.2 Searching for a Year Between Two Record Dates

When you choose this option you must select exactly two date fields--you will be returned to the main menu if you don't. After you make your choices, you are given the chance to start over in case you made a mistake.

Next you must select exactly one year, four digits long. Every record accessed will be checked to see if this year lies between the years in the two date fields you chose, including those years. After you've chosen the year, you're given the chance to verify it.

The search starts after you make your access selections.

10.2.2.3 Searching for Months and Days

When you select this option you can choose any or all of the date fields. You end your selections by pressing 'return', e.g.

```
FIRST DATE NUMBER:      <2 'return'>
NEXT DATE NUMBER:       <'return'>
```

You are then given the chance to verify your selection before continuing.

Next you may supply up to 31 combinations of month and day, in response to

```
        FIRST MONTH/DAY (MMDD):
or      NEXT MONTH/DAY (MMDD):
```

The MMDD means two digits each for month and day. For example, 29 January is 0129 and 3 July is 0703. If you want to search only for months you can use zeros for days or leave them off, e.g. 03 or 0300 would cause a search for March, any day. Likewise if you want to search for days only, use zeros for the month, e.g. 0021 causes a search for the 21st of any month. When you answer with **<'return'>** instead of a value, you are done and are given the chance to verify your entry and try again if needed. If you have selected day/month order in the MANAGER, the questions shown above and the responses will have the day and month in reverse order.

Finally you must make your choices from the access menu, and the search starts.

10.2.3 Searching on People

You choose to search on people by pressing **<C>** from the Search menu. You first choose the fields to search and then the people you want to search for. SEARCH shows you the fields that you can search, namely,

1) MOTHER
2) FATHER
3) SPOUSES
4) CHILDREN

plus any person fields you may have defined for yourself. Since person searches often use all the fields, you are asked

DO YOU WANT TO SEARCH ALL NAMES IN EACH RECORD?

A **<Y>** answer bypasses the further choice of fields. If you want particular fields, answer **<N>** or **<'return'>** for the question, and supply numbers to pick the fields; answer **<'return'>** when you have enough. You don't have individual control over spouses and children searches, e.g. you can't search only second spouses or third children fields; if you need to do that you should do the more general search, then examine the individual records (using PERSONS or EDIT) for those found. When you finish choosing fields, the list is shown to you for verification and restart if needed.

Next you choose the names to search for. You may do this by name or number. When you supply a name, the program searches both for the exact name as entered and for a match of your entire entry with any of the parts of the name that is represented by the RN stored in the field.

SEARCH asks you for name/number one at a time until you answer with **<'return'>** to end the list. You may search for up to 10 names at the same time.

When you supply a number, the program displays the name corresponding to that number and asks for confirmation. This helps you find the right numbers if you are unsure. A typical sequence might be:

```
FIRST NUMBER OR NAME:          <MILLIE>

NEXT NUMBER OR NAME:           <24>

THAT IS THE NUMBER FOR:

     CHUCK BROWN

USE IT?        <Y>

NEXT NUMBER OR NAME:           <YOLANDA ACORN>

NEXT NUMBER OR NAME:           <'return'>

YOU HAVE CHOSEN:

1)   MILLIE
2)   CHUCK BROWN
3)   YOLANDA ACORN

OK TO CONTINUE:    <Y>
```

(Any record with a relative named Millie will be found from the first selection. Any record with 24 stored in a person field will be found from the second selection. Only Yolanda Acorn stored in a record as a full name with no RN would be found from the third selection, and not any records where some RN for Yolanda was stored.)

The access menu then appears and the search begins after you make your selections.

Note that you might have chosen to search the people fields for numeric character strings rather than this. If you did, SEARCH wouldn't display the name corresponding to the number for your confirmation. Also the

results might be different, e.g. if you said use '21' then RN's 216, 521 and 21 all satisfy the search as character strings.

10.2.4 Searching on Counts

The search on counts is quite similar to the search on names, except that there is no confirmation of name needed. You elect to search on counts when you press <D> from the Search menu. SEARCH shows you the fields you can search on, namely

1) NUMBER OF MARRIAGES
2) NUMBER OF CHILDREN
3) NUMBER OF NOTES

plus any count fields you may have defined for yourself.

You choose one or more of these by supplying the number 1, 2, etc., ending the list with a 'return' e.g.

```
FIRST NUMBER:      <2 'return'>
NEXT NUMBER:       <1 'return'>
NEXT NUMBER:       <'return'>
```

You are then shown the list for verification before continuing.

Next you supply the actual values to search for. You type these one at a time until your list is complete, then answer with <'return'>. You can supply up to 10 numbers.

Here comes the access menu once again, and the search begins when you make your choices.

An example may be of interest. Suppose you wanted to find everybody with 3 or more marriages. Then the sequence would be as follows:

```
1)  NUMBER OF MARRIAGES
2)  NUMBER OF CHILDREN
3)  NUMBER OF NOTES

FIRST NUMBER:      <1 'return'>
NEXT NUMBER:       <'return'>

YOU HAVE CHOSEN:
1)  NUMBER OF MARRIAGES

OK TO CONTINUE?    <'return'>
```

```
CHOOSE UP TO 10 NUMERICAL VALUES TO
SEARCH FOR

FIRST NUMBER:       <3 'return'>
NEXT NUMBER:        <4 'return'>
NEXT NUMBER:        <5 'return'>
NEXT NUMBER:        <6 'return'>
NEXT NUMBER:        <7 'return'>
NEXT NUMBER:        <'return'>

YOU HAVE CHOSEN:
1)   3
2)   4
3)   5
4)   6
5)   7

OK TO CONTINUE?     <'return'>
```

10.2.5 Searching for Empty Fields

You choose to search for empty fields by pressing <E> from the Search menu. This kind of search is quite similar to searching for strings except that the string in this case is empty. The differences between this and the character string search are that you don't need to define what you're looking for, and all types of fields can be searched, including count fields.

You will probably use this type of search to help you find where to fill in missing information. For example, you might have the 15 children of the NICHTIG family stored in RN's 1156 through 1170 and want to find which ones are missing the marriage information. You could look at each one yourself, or you could set up a search in the range 1156 to 1170 for empty NUMBER OF MARRIAGES field. SEARCH would then provide you with a list of the RN's to change or examine. Obviously, the larger the number of records to be searched, the more desirable it is to use SEARCH rather than look at each one yourself.

You will be shown a list of all the fields you might want to check for missing information. You can select up to 10 of these by number. SEARCH won't check individual marriage fields such as the place of the third marriage, but you can search for any marriage locations missing out of the total marriages indicated by each Number of Marriage field. In other words if Joe has 1 marriage and John has 3, SEARCH will test only for that many marriages, 1 and 3 respectively. Similarly SEARCH won't check for whether the third child is missing but you can use the program to find if any of the children fields have been left blank.

After you have chosen your fields of interest and answered

NEXT NUMBER: **<'return'>**

to indicate "that's all", you are shown the list for verification. When you do

OK TO CONTINUE? **<'return'>**

the next thing that appears is the access menu--there wasn't anything else before that to choose because you're looking for "empties". (nickel per bottle?)

10.3 Outputting Your Results

The results of your search or searches are now stored in memory and you want to have a look at them or save them? Press **<B>** from the SEARCH main menu to get the choice of three places to put the names:

A) OUTPUT TO SCREEN
B) OUTPUT TO PRINTER
C) OUTPUT TO DISKETTE

Let's see what happens with each of these and expose the parameters that affect them. You can get the parameters menu by pressing **<P>** from here. More details on the parameters will be found in the next section, 10.4.

The screen output shows up to 20 names at a time and then pauses with

PRESS ANY KEY TO CONTINUE

This gives you the chance to see everything before it scrolls off the top of the screen. You can type **<CTRL Z>** at any time to abort the display and return to the main menu. The effective parameters are the same two that control the format of a name for display during a search, i.e. USE LAST NAME FIRST and SHOW MARRIED NAME.

The printed output includes a header and the names for people who satisfied your searches. The header can be the standard one or one you define for yourself, as controlled by the USE CUSTOM HEADER parameter. An example of a printed output with standard header appears in Figure 22

```
SEARCH FOR DATE BETWEEN TWO YEARS:          Jan 1986
   DATE OF BIRTH

SEARCH FOR THE FOLLOWING VALUES:
   1800
   1899

SEARCH CHARACTER STRINGS:
   PLACE OF BIRTH
   PLACE OF DEATH/LIVING
   PLACE(S) OF MARRIAGE

SEARCH FOR THE FOLLOWING VALUES:
   GERMANY
   GERM
   WAGON
   MOUND

RECORDS FOR THE FOLLOWING PEOPLE SATISFIED THE SEARCH:

    RN   NAME

    8) SIMON VORENBERG
    9) THERESA HARRIS
   11) CARL HARBERG
   12) GOTLIEB FREDRIC MAYER
   13) ERNEST JACOB MAYER
   93) EMMA VORENBERG
   94) CLARA (KATHINKA) VORENBERG
   95) JULIA VORENBERG
```

SEARCH Printed Output

FIGURE 22.

As you can see, the standard header shows what selections you made to arrive at the list, i.e. the type of search, fields searched, and values used. Most of the other parameters are in effect here as well:

a) you can have the printer move the paper to the top of the next page when the LIST is finished;

b) you can set the size of the left margin to allow for binding;

c) you can set the order in which the parts of the names are printed--last name first or vice versa;

d) you can have a woman's married or maiden name used; and

e) you can position the header to the right or left side of the page for visibility purposes.

The output to diskette is quite similar to saving a list of names to a diskette file using the LISTS program, and, in fact, the format in which they are stored is identical. You would use this type of output to pass your results to LISTS for alphabetizing or printing. SEARCH needs to know which diskette to store on and what to call its output. The first is found by asking you

SAVE TO WHICH DISK DRIVE (1-2)? **<2>**

followed by

PLEASE INSERT A SCRATCH DISKETTE IN DRIVE 2.
PRESS ANY KEY WHEN READY

If you don't know what is meant by a scratch diskette, please see section 10.4.4 or 10.4.1. The name for the file the list is to be saved in is found by asking

WHAT DO YOU WANT TO CALL THE FILE?

We suggest you pick a name that is descriptive of the search you just did, since it is easy to forget what's in a file named something like "ABCD--J2M". If you answer this question with a **<'return'>**, you will be shown what's on the diskette; this gives you the chance to choose an old or new name for storage. After the diskette contents is shown you will be asked the question again. To gain release from this trap if you change your mind or have a problem, type **<CTRL Z>**

None of the parameters have any effect when saving your search results to a diskette. If you want to preserve the date of the search, you can include it as part of the name of the file.

10.4 Changing Search Parameters

This section discusses the CHANGE PROGRAM PARAMETERS menu for SEARCH. You get that menu by pressing <C> from the SEARCH main menu or <P> from any other menu. There are ten parameters available, with default values; the default values can be reset using the MANAGER program as described in section 12.

You elect to change any item by pressing the letter shown in front of the name, e.g.

WHICH (A-K)? <C>

results in

USE LAST NAME FIRST?

When you supply a value you are returned to the CHANGE PARAMETERS menu. If you pressed a letter by mistake and want to preserve the old value, just press <'return'> when it asks for the new value. To escape from this menu, type <'return'> in response to 'WHICH?'.

a) TOP-OF-FORM AFTER PRINTS. This is normally set to YES. When it is on, the printer paper will be moved to the top of the next page when all printing is complete. When it is NO, no extra paper movement occurs after printing. You would use this to conserve paper, or to have your search results on separate pages.

b) SIZE OF LEFT MARGIN. This is used to allow for binding room and is normally 10 spaces. The actual width in inches depends on what your default print size was set to, using the MANAGER.

c) USE LAST NAME FIRST. This is normally set to YES. When it is YES, every name is shown or printed with the last name first followed by a comma and the remainder of the name. When it is NO, the last name appears before the title. The part of the name that appears first for a married woman depends on the next parameter.

d) SHOW MARRIED NAME. This is normally set to NO. When it is NO, a woman's maiden name is used for display and printing. When it is YES, the woman's married name is used. If the woman has no Married Last Name saved, this parameter has no effect.

e) TAB BEFORE HEADER. This is used to position the header on a printed list of names to the left or right of the sheet for ease of viewing. It is specified in number of spaces, and is usually 10. It affects both standard and user-defined headers. Choosing a very large value may cause wrap-around of some of the header lines.

f) USE CUSTOM HEADER. This is normally set to NO. When it is NO, the standard header is used on printed output. When it is YES, you will be asked a series of questions to define a header. Please refer to section 5.4 for details on how a header is defined.

g) IGNORE UPPER/LOWER CASE. This is normally set to NO. When it is NO, different forms of the same letter are considered distinct in Name Set accesses and character string searches. When it is YES, upper and lower case distinctions are ignored.

h) LINES PER PAGE. This is a number between 0 and 66, and is normally set to 55. The next page will be started when this number of lines has been printed. If you don't want a page break, you may set this parameter to 0.

i) FIND APPROXIMATE YEARS. The default setting is NO. When the parameter is set to YES, approximate years stored in your data (examples: about 1860, circa 1722, before 1892) can be found using the date searches for a year. When the parameter is NO, only standard dates are searched. Having the parameter set to YES may cause erroneous results depending upon how you have stored your information.

j) DATE. The current date is used in the standard header for printed output. Its value is set from your answer to the prompt for date upon starting, if you are using that feature. The value is first set at the time you start up, and is preserved when you move among the FAMILY ROOTS main programs (except LISTS).

10.5 Checking Diskettes

It has been said before. Try section 5.5, 6.5, or 7.5. Don't switch diskettes without doing this from the main menu, unless you are told to switch.

10.6 Exiting SEARCH

When you press <E> or <'return'> on the main menu, you get the exit menu. This corresponds to the exit menu for EDIT with identical results. Please refer to section 4.7 for more details if you need them.

10.7 Miscellaneous Information on SEARCH

Several features discussed for EDIT are valid here as well. Please refer to section 4.8 for complete details. The following are applicable:

a) Any question may be answered with a <'return'>

b) CTRL-Z aborts any processing in progress and returns you to the main menu

c) PRESS ANY KEY TO CONTINUE is used to prevent information from scrolling off the top of the screen before you have seen it.

d) GOTO 20000 usually gets you back into the program after an error, but be cautious.

Blank page!!!

11. USING 'WORDS' OR A WORD PROCESSOR

The WORDS program is a line editor for editing, storing, printing, and displaying textual information. A line editor is a limited type of word processor. If you have a word processor that is capable of making the appropriate kind of files, we encourage you to use it in preference to WORDS. We are including WORDS as a part of Family Roots for those that need something to get started or for those that don't have a requirement for lots of capability.

If you start with WORDS and graduate to a better word processor, the files generated with WORDS can be used in it either with no or with minor alteration. See the end of section 11.1 for our experience with one word processor in this regard.

A word processor would handle two primary kinds of files related to Family Roots. The first is a historical passage, anecdote, or set of notes that is associated with one person in your data. This kind of file would be either printed independently or appended to an individual sheet for the same person using the PERSONS program. The second type of file would contain a form generated by one of the Family Roots programs, a chart for example. This file might be edited before printing or might be included into a larger document.

WORDS has a limit on the number of lines in the files it can process. The limit can be set in the MANAGER program, but it can never realistically be more than about 5 pages. The limit on length implies that WORDS would be primarily applied to the files for individuals noted above. Files containing forms would usually be too big for WORDS to handle.

There are other types of files you might generate with a word processor that would have no direct use related to Family Roots. Examples would include lists of references and your correspondence. So long as these files are short enough, they could be handled by WORDS. Longer documents like these could be broken into smaller pieces for file storage if you wanted to use WORDS on them.

The first section below discusses the requirements and procedures for using a word processor with Family Roots. Succeeding sections describe the WORDS program in detail.

11.1 Using a Word Processor with Family Roots

Only word processors that store standard alphanumeric characters in "text" files on unprotected 1541/1571 formatted diskettes can be used with Family Roots in the senses described above. Let's talk about what that means. There are four components to that statement: standard characters, text files, 1541/1571 format, unprotected diskettes.

1541/1571 format. Each operating system has its own method for using space on diskettes. A diskette prepared with one operating system almost always cannot be read directly by another; the exception is where operating systems are made specifically to be compatible with each other. Some commercial word processors use their own disk access functions to speed up the reading and writing process of text files. Such files are usually incompatible with the standard Commodore DOS, which means that such files can probably not be used by FAMILY ROOTS.

Standard Commodore ASCII in sequential files. All letters and numbers that you use in your text file are stored as numbers on diskette. They are encoded using the Commodore ASCII encoding scheme. FAMILY ROOTS can only read files that are encoded using Commodore ASCII (sometimes called PET ASCII). It can read files in regular ASCII, but the text would be scrambled. In some commercial word processors you have the option to save files in either Commodore ASCII or standard ASCII. If you want to use the file created with that word processor in FAMILY ROOTS you must save it in standard Commodore ASCII. Furthermore, the text file has to be of sequential type. You may check this by looking at the directory of the diskette. A file descriptor of SEQ indicates a sequential file, i.e. one that WORDS can access. All other types of files are inaccessible to WORDS and FAMILY ROOTS.

Unprotected diskettes. You may find that you aren't able to see a directory at all on the data diskette for your word processor, or you may get errors when you try. Some companies are very tight and protective of their software, not allowing any external access to their programs or the data generated by them. That's what has happened if you get this kind of response. You will not be able to use a word processor like this with FAMILY ROOTS (unless you can convince the other company to be less protective).

Our experience with specific word processors. As this is written, we have not tried any word processors, yet. We intend to try some and will append sheets showing success/failure and any difficulties encountered. If you would like to pass on any experience for the benefit of other users, we would welcome it.

11.2 Using Standard File Names

Text files that have standard names can be appended automatically to individual sheets by the PERSONS program. Such text files can be made with your word processor or by WORDS. By setting a parameter in WORDS you can have it automatically use the standard names. A text file of interest contains historical information for one person who has a record number assigned.

A standard file name consists of the letters "rn", followed by one space and then the number itself, and terminated by a "default suffix." The default suffix can be defined using the MANAGER and could be empty or something like ".text". In the manual, an example of a standard name would be

rn 384

for the person with record number 384. If the default suffix is .text, the name would be

rn 384.text

To automatically append text files made with your word processor using PERSONS, you must follow the file naming standards.

The letters "rn" are defined in the CONFIGURATION file. If you don't make any changes, the "rn" will be the correct label. If you make any change, you will need to use whatever designation you substituted. Please see section 12.7.1 for further information.

11.3 Detailed Use of WORDS

WORDS is a general purpose, line oriented text processing program. It operates on "text files" which may contain anything you want to place in them. WORDS does not operate on the standard data generated using the EDIT program, and does not store its files on standard data diskettes. WORDS files may be automatically named according to the standard name convention described in section 11.2, or you may assign whatever names you wish.

WORDS has a comprehensive set of commands that allow you to enter, change, delete, move, and copy text; to position yourself within the text; to find appearances of a string in the text; to print part or all of your text; and to load, save, and delete files containing the text. You will need to have at least one blank diskette available before starting WORDS; it does not have to be formatted before you start.

To start WORDS, boot the Main Programs diskette and select the WORDS program from the Programs Menu, or get to the Programs Menu from any other program and do likewise. The program diskette will whirr while WORDS is loaded, followed by

PRESS ANY KEY WHEN DATA DISKETTES ARE IN THE DRIVES.

If you are making files for individuals, you should insert one of the standard (numbered) data diskettes in the drive at this point. With 1 drive, the standard diskette comes first, whereas with 2 or more drives,

you may have a formatted diskette in one of the other drives. If your WORDS text diskette hasn't been formatted yet, we suggest you do not place it in a drive yet; it won't hurt to do so, but you will get a long pause and a lot of noise from your disk drive before WORDS continues.

After you press a key, WORDS checks all the drives and finds the location, identity and type of all the diskettes.

11.3.1 WORDS Main Menu

After the disk drives are checked, the WORDS main menu will be displayed. The menu gives you six choices as follows:

A) WORK ON TEXT
B) SHOW FILES ON DISKETTE
C) FORMAT DISKETTE
D) CHANGE PROGRAM PARAMETERS
E) CHECK DISKETTES
F) EXIT PROGRAM

The titles are descriptive of the operations performed. Selecting the first will let you work with a new or existing file. The second shows the list of files on a text diskette that's in a drive. Item C can be used to format the diskette you intend to use for text, or to format ANY diskette for that matter. The last three items appear on all the main menus and may be familiar by now.

The next sections describe how you select the appropriate file, and how you use the many commands that are available.

11.3.2 Accessing Files

When you select <A> from the WORDS main menu, you will be asked which file you want to work on. The next menu looks similar to the access menu for the other programs:

WORK ON TEXT BY:

A) NUMBER RANGE
B) NUMBER LIST
C) NAME SET
D) FILE I WILL NAME

and sometimes a fifth item whenever there is already a list in memory (see 4.2).

After you choose any of the first three, WORDS will ask for whose files you want to work on. The questions are exactly as described in section

4.2 for EDIT, which may be consulted for more information. After WORDS finds the first record number, it will retrieve the name for that person from the standard data diskette to be saved in memory in case it is needed later. If you didn't have a standard diskette in a drive, you would be asked for the appropriate one at this point. The use of the standard diskette is independent of whether you are using standard file names for your text files.

If you select <D> from the access menu, no assumptions are made about the text file being for a person, or about the purpose of the file. Consequently there won't be any access to a standard data diskette with this choice.

If you have the LOAD FILE WHEN STARTING parameter set to 1 (meaning YES), WORDS will look for an appropriate file to put into memory. It will attempt to retrieve the file from any text diskettes you have made available. It needs to know what file name to try, however. If you have chosen one of the name accesses and have the USE STANDARD FILE NAMES parameter set to YES, it will automatically load anything from a file with the standard name. If there isn't any such file, nothing will be stored in memory after the attempt.

Assuming you have LOAD FILE WHEN STARTING set to YES, and have USE STANDARD FILE NAMES set to NO or have selected the "file I will name" option, WORDS will ask for the file name. Pressing <**'return'**> in answer to the request will show the list of files on the diskette. If you decide you don't want to load a file after all, CTRL-Z will let you continue without loading. If you have a problem with an error 23 or "string too long" error when trying to load a file, please refer to section 11.3.6 on the ACCEPT LONG LINES parameter.

When the LOAD FILE WHEN STARTING parameter is set to NO, there is no attempt made to read an existing file before starting.

11.3.3 Typing the Commands for WORDS

After making your choice of file to work on, WORDS continues by showing

```
COMMAND:
```

on your screen. It is waiting for you to type a command to tell it what to do. A brief summary of the commands is shown in Table 6, and results of typing each of these is described in the following paragraphs. There is also a brief reminder screen available within WORDS that will appear if you give the command "?" or "HELP"; that screen is shown in Figure 13. You start entering data for the first time by using the Insert command.

Each command consists of one or more letters of the command name followed by additional information depending on the command. In some cases the added information is optional, in others essential. For example, if you use a "Change" command without saying what to change, you will get a message

SYNTAX ERROR

meaning WORDS needed to know more about what you wanted to do. It is only necessary to type the first letter of any command, but you may type as much of the command word as you wish. Every command becomes effective after you press 'return', i.e. there is no command that happens from a single keystroke.

Before we continue, let's get some terms straight:

a) CHARACTER. A character is anything you can get to appear on the *screen using the keyboard of your Commodore* 64. This includes quotes, letters, numbers, punctuation, and the odds-and-ends that appear on the top row of keys.

b) LINE. A line of text is any string of characters you type. A line ends when you press the 'return' key or when WORDS determines you have used up the allotted number of characters in the line.

c) LINE LENGTH. The line length is the maximum number of characters in a line. It is determined by the printer page characteristics. Those are set by your default print size, paper width, SIZE OF LEFT MARGIN parameter, and SIZE OF RIGHT MARGIN parameter.

d) MAXIMUM LINES. WORDS has a limit on the size of document it can handle. You must allocate the maximum number of lines in a document using the MANAGER. As a practical concern, you won't be able to work on files with more than about 5 pages or 300 lines of text. If you set the MAXIMUM LINES IN 'WORDS' parameter in MANAGER to zero, WORDS won't let you get to its main menu; you will get an error message. (You may construct larger documents by using more than one file.)

e) LINE NUMBERS. Every line of text in memory has a line number assigned to it. The numbers are necessary in many of the commands to tell WORDS which lines you want to work on. For new text and for text from files loaded from diskette, the line numbers always start at 1 and increase in increments of 1, i.e. the numbers are 1, 2, 3, 4, 5, 6, 7, etc. When you make changes to your text, the sequence may have fractional numbers like 2.25 or may have missing numbers. There is a command to make the numbers start at 1 and increase by 1's again. If you save some text to a diskette file

COMMAND LIST

COMMAND	FUNCTION
Align	Adjust text to margins & right justify
Bottom	Move pointer to last line
Change n/text/new text/	Changes text within a line
Directory	Show Catalog of text diskette
Excerpt n-m j BY i	Copy block of lines to after line j
Find /text/	Scans for the given text
Help	Shows the screen in Figure 23
Insert n BY i	Puts text into memory
Jump i	Adjusts current line pointer
Kill f	Wipe text from memory, or delete file
Load f	Store text in memory from file
Move n-m j BY i	Copy lines, delete from current position
Number	Renumbers lines by ones
Overwrite n BY i	Retype line n
Parameters	Show menu of parameters
Quit	End work on this text
Remove n-m	Eradicate lines
Save f	Puts text into diskette file
Top	Moves line pointer to first line
View n-m	Shows lines on screen
View ALL	
Write	Prints text on printer

TABLE 5. Command List for 'WORDS'

COMMANDS

R = REMOVE n-m	I = INSERT n BY i
V = VIEW n-m	C = CHANGE n/tx/tx/
F = FIND /tx/	O = OVERWRITE n
J = JUMP i	T = TOP
B = BOTTOM	N = (RE)NUMBER
M = MOVE n-m j BY i	E = EXCERPT n-m j
L = LOAD f	S = SAVE f
K = KILL f	? = COMMANDS
D = DIRECTORY	P = PARAMETERS
W = WRITE/PRINT	Q = QUIT
A = ALIGN	^Q = QUIT INSERTING

(n, m, j ARE LINE NUMBERS; tx IS TEXT;
f IS A FILE NAME; i IS AN INCREMENT)

FIGURE 23. WORDS Help Screen

and then load the same file into memory again, the line numbers will always be 1, 2, 3, etc even if they weren't that way when you saved the text. When you print your text, you may have the line numbers appear or not, as you prefer. The line numbers are not stored in the text files, in order to maintain compatibility with word processors.

f) CURRENT LINE, LINE POINTER or just POINTER. When you work on text within WORDS, you are assumed to be positioned at a particular place within the text. The line pointer is the line number of that position. When you give some commands without saying which line, they will assume the line number given by the line pointer. Other commands work from the line pointer to the end of the file, but not backward. The line pointer has a value of 1 when you first start working on text.

The following paragraphs tell how to use each of the commands. If you are starting for the first time, you would use the INSERT command to make your lines. The commands are discussed in alphabetic order.

11.3.3.1 The Align Command

The Align command will reformat your text to the paper and margin settings, and will right justify when the RIGHT JUSTIFY parameter is set to YES. That means if your text was made with a 70 character line length and you changed the line length to 60 characters, each line would be shortened. The right margin would be made even by inserting extra spaces in the middle of each line if you asked for right justification.

The Align command works only from the position of the line pointer to the end of a paragraph. The end of a paragraph is located as a blank line or as a line starting with a space " ". If you want to Align to the end of the text, you may use the ALL parameter:

```
Align ALL
```

Any lines starting with a blank will not be justified. Note that you must use the Top command to position the line pointer if you want to Align the entire document in memory.

Alignment is fairly slow. Please be patient.

11.3.3.2 The Bottom Command

The Bottom command moves the line pointer to the last line of the text in memory and displays it.

11.3.3.3 The Change Command

We all make mistakes. Wouldn't it be a shame to have to stop a beautiful train of thought just to alter the "N" in noses to an "R"? You can return to that line later and correct it with the Change command. Here's how to do it.

Have WORDS show the line on the screen by typing

COMMAND: **<V 1-8>**

(or any range of line numbers where you think the error was made. Remember that the brackets "<>" are just to show what you type, but aren't to be included.). If your mistake was in line 6, you would then type

COMMAND: **<C 6 /NOSES/ROSES/>**

The C says change line 6 from what is between the first two slashes to what is between the second set of slashes. If the last line shown on the screen is the line you wish to change, then you don't have to include the line number in this command.

The Change command searches through the line to find the first occurence of the text found between the slashes and then replaces it with the text found between the second set of slashes. Understanding this will allow you to "insert" whole phrases in place of a single word in an existing paragraph. This is how it would be done:

COMMAND: **<C 6 /the/this beastly, downtrodden/>**

The first occurence of the word "the" would be replaced with the phrase shown.

Characters or whole words and phrases can be eliminated by changing them to 'nothing':

COMMAND: **<C 6 /Ah,//>**

Note the lack of a space between the second pair of slashes.

You must be exact in describing what characters you want changed. If a character is capitalized in the existing text, you must capitalize it in the Change command.

After your change has been made, the altered line will be displayed. If you didn't achieve the desired result, try again.

11.3.3.4 The Directory Command

The Directory command shows the list of files on a text diskette in a drive. An example list might look like

```
DISK NAME:  words.data    ID: fr    OS:  2a

Length              File Name                   Type

2                   "id 2"                      seq
4                   "id 27"                     seq
1                   "controls"                  seq
```

The number in the first column is the size of the file in blocks or sectors (block = 256 characters). The file name is in the middle column. The descriptor at the end shows the kind of file; the most commonly appearing ones are "seq" for a text file, "prg" for a program file, and "rel" for a data file.

Any diskette used by WORDS will have a file named CONTROLS on it. This contains the identity markings of the diskette. It is possible to work on that file with WORDS, but we strongly suggest not doing so -- you may cause problems for yourself.

11.3.3.5 The Excerpt Command

The Excerpt command copies a block of lines from one position in your text to another without changing or deleting those lines in their original position. This works almost the same as the Move command; please see 9.3.3.12 for more description. The only difference between these two commands is that the Move command deletes the original lines but Excerpt doesn't.

11.3.3.6 The Find Command

When dealing with lengthy passages of text, it becomes inconvenient to keep track of what thought was expressed at what line number. The Find command lets you scan the text to locate the lines containing a particular string of text. It works only from the current line to the end of the text. If you want to scan the entire text, you will first need to position the line pointer to the starting line using the Top command.

When you use the Find command without giving any text, it will assume the text you searched for with the most recent Find command. That lets you find and change a line, then advance easily to the next line where the desired text appears.

Let's look at an example. Suppose you had used the full word "Wisconsin" in several places and now want to abbreviate that to "WI". You would first position the line pointer and then start the search with

```
COMMAND: <T>
COMMAND: <F/Wisconsin/>
```

After the first command, WORDS would display the first line of text. After the second line, the first line containing "Wisconsin" would be shown. That might be

```
82    The state of Wisconsin is a wonderful place to live.
```

If that was one you wanted to change, you would use the Change command. To move on to the next appearance, you would do

```
COMMAND: <F>
```

The omission of any text from the last command makes it assume you are still looking for "Wisconsin". If it found

```
126   He lived in Appleton, Wisconsin.
```

you might be more inclined to abbreviate that one.

11.3.3.7 The Help Command

The Help command displays the screen shown in Figure 23. This gives a brief list of all the commands and the extra information that may be needed by each. The Help command and a response of "?" are the same thing.

In the Help screen, the cryptic letters n, m, and j imply that line numbers are to be used. The letter i implies an increment. For example, if you want to insert at least 4 lines between line 3 and 4, you may want to use an increment of .2 (instead of the usual increment of 1) to insure enough lines are available. If you change the increment in one command, it will retain that value until included in another command with an increment.

Where you see the letter f, a file name is implied. In commands with "/text/", an entry of text to change or find is implied. In those commands showing "BY" as a possibility, those letters must be typed with a space before and after.

Some commands have an optional entry of "ALL" in place of a range of line numbers. If you use "ALL", the three letters must be typed; the command will then affect all lines of text in memory.

11.3.3.8 The Insert Command

This will be the first command you use when starting with a blank slate. It shifts you into an "insert mode" where WORDS will expect you to be typing lines of information. The line number for the line WORDS expects you to type will be shown on the screen after you give a valid Insert command, with the cursor positioned after the number.

After you fill up a line or press 'return' to signal the end of a line, you will usually be prompted for another line. In other words, you will remain in "insert mode". To get out of "insert mode" and return to the "COMMAND:" prompt, answer the request for more typing with either CTRL-Q (Q for Quit) or CTRL-Z (Z for Zap, to be consistent with other uses in Family Roots).

There are two cases where you would exit from "insert mode" automatically. The first is where you have used up all the available lines, i.e. you have stored the maximum number of lines in memory. The second is where the next line number is the same as an existing line number. That happens because you can't have two line numbers that are the same, and it presumes you didn't want to erase the other line.

When you type lines in "insert mode", a certain line length is assumed. When you approach the end of a line, WORDS will beep at you as a reminder. When you type the first space after the end of the line, the last word will be moved from that line to a new one automatically. In other words, you don't have to press 'return' at the end of each line -- you can just keep typing. This is called "word wrap" in many word processors.

The length of a line is determined by your default print size, the paper width, and the left and right margin settings. The default print size and paper width are specified as a part of your printer setup in the MANAGER program. The margin settings come from two parameters in WORDS. Let's look at an example. If your default print size is 10 characters per inch and your paper width is 8 inches, you nominally have 80 characters or columns of width available. If you set your left margin to 10 spaces and your right to 12 spaces, your line length in WORDS will be 58 characters.

The Insert command wants a line number and an increment. If you don't provide a line number, it assumes you want to insert after the current line, as determined by the line pointer. If you don't specify an increment, it assumes you want to use either 1 or the last value of an increment in any command.

Here's what might happen if you were starting to enter some new text:

```
COMMAND: <I>

1    This is the text you type in.
2    This is a longer line that automatically word wrapped
3    to the next line.
4    CTRL-Q

COMMAND:
```

If you wanted to insert some new lines between line 1 and 2, you would need to use an increment. If you don't use one and try to insert a line after 1, you will get a message that line 2 already exists, followed by a request for another command. Here's how you might do it:

```
COMMAND: <I 1 BY .01>

1.01   This is a line inserted after the first.
1.02   This is another inserted line.
1.03   CTRL-Q

COMMAND:
```

If you use the View command, you would see

```
COMMAND:  <V ALL>

1    This is the text you type in.
1.01    This is a line inserted after the first.
1.02    This is another inserted line.
2    This is a longer line that automatically word wrapped
3    to the next line.
```

showing that the inserted lines get put into increasing numeric order in your text. If you don't like the inserted lines being indented more than the others, you can use the Number command.

If you make an error while typing and haven't gone to the next line, you can use the INST/DEL key to back up and retype it. Or you may complete the line and then use the Change command. If a new line is started, you can't return to the previous line with the back arrow.

If you want to do centering or positioning, you will need to format the text on the screen yourself by using an appropriate number of inserted spaces.

11.3.3.9 The Jump Command

The Jump command changes the current value of the line pointer. It is used to position yourself wherever you want in the text. You may jump toward the bottom of the text with positive increments, or towards the top of the text with negative increments. Let's look at an example. Assume you have four lines of text

```
1   First
2   Second
3   Third
4   Fourth
```

If you do

```
COMMAND:  <T>
COMMAND:  <J 2>
```

the line pointer would be set to 3, indicating you are positioned at line 3. Line 3 would be displayed on your screen after the last command. If the next command is

```
COMMAND:  <J -1>
```

the line pointer would be set to 2.

11.3.3.10 The Kill Command

The Kill command without any file specified will delete all the text from memory. If you specify a file name, that file will be deleted from the text diskette. If there isn't any file with the given name on the diskette, no file will be deleted, but there will be some disk drive activity while the diskette is examined. Use the Directory command to check the results of the Kill.

Since the Kill command can be rather damaging if used by mistake, WORDS will always ask for verification before proceeding.

11.3.3.11 The Load Command

The Load command retrieves the text in a file and stores it in memory. When you have the USE STANDARD FILE NAMES parameter set to YES and have selected one of the access methods by person, the file with the standard name will be loaded, if available. If there isn't any such file, nothing will be placed in memory.

When USE STANDARD FILE NAMES is set to NO or when you have selected the "file I will name" access, you will be asked for a file name. If you

want to see the list of files, press 'return' in answer to the request for a name. When you supply a name, the contents of that file will be read into memory. If you supply an invalid or non-existent file name, nothing will be loaded.

If you have problems with an error 23 or "string too long" error, please refer to the information in section 11.3.6 on the ACCEPT LONG LINES parameter.

11.3.3.12 The Move Command

The Move command allows you to move one or more lines to another position in the text. The moved lines will be removed/deleted from their original position. If you want to move lines but not delete the originals, the Excerpt command will accomplish that.

You must tell the Move command the range of lines you want moved, where you want to move them to, and how you want the lines numbered, i.e. the increment. The destination of the move is treated as an automatic insertion after the indicated line number. If there isn't enough space in terms of available line numbers, then Move won't do anything. Making the increment smaller would usually solve the problem.

Let's look at an example. Suppose your text is

```
1    Line one
2    Line two
3    Line three
4    Line four
5    Line five
```

If you gave the command

```
M 2 4 BY .1
```

meaning "move line 2 to after line 4 with an increment of .1", you would see

```
4.1  Line two
```

on your screen. Giving the command "V ALL" would show the text as

```
1    Line one
3    Line three
4    Line four
4.1  Line two
5    Line five
```

11.3.3.13 The Number Command

The Number command changes the line numbers to start at 1 and increment by 1. If you used the Number command and your text was the same as the last example in the previous section, your text would become

```
1    Line one
2    Line three
3    Line four
4    Line two
5    Line five
```

11.3.3.14 The Overwrite Command

The Overwrite command allows you to retype the specified line. If you don't specify a line, it assumes the current line as determined by the line pointer. If you do this by mistake, using CTRL-Q will allow you to escape without losing anything.

When you give the Overwrite command, WORDS will go into the "insert mode" as described for the Insert command. Actually, the Overwrite command is the same as the Insert command, except that Overwrite will destroy the current line and Insert starts after the current line. If you don't specify an increment with using BY, the last increment specified for any command will be used. You can insert as many lines as you wish after an Overwrite command, subject to the constraints discussed in the section for the Insert command.

11.3.3.15 The Parameters Command

The Parameters command causes the menu of parameters for WORDS to be displayed. This menu is discussed in section 11.3.6. The P command gets you the appropriate menu of parameters in all of the Family Roots programs from any menu.

11.3.3.16 The Quit Command

The Quit command ends your work with the text in memory. WORDS will attempt to save the text to a diskette after the Quit command is used. In order to do that, it needs to know a file name. If you have the USE STANDARD FILE NAMES set to YES and have selected one of the name accesses, the text will be saved to the file with the standard name. Otherwise you will be asked for a file name.

If you want to quit without saving, please use CTRL-Z. You may also prevent saving to a file by using CTRL-Z if you are asked for a file name. You wouldn't have that opportunity when using standard names.

11.3.3.17 The Remove Command

The Remove command deletes one or more lines from the text in memory. Once the text is gone, there's no way to get it back. If you have any uncertainty about the matter, we suggest you move the lines in question, perhaps to the end of the document, and then delete them later when you are more certain.

If you used the command

```
R 3 7
```

then all lines from 3 to 7, including lines 3 and 7, would be removed. Specifying a single number will remove one line of text.

11.3.3.18 The Save Command

The Save command causes the text in memory to be stored in a file on the text diskette in the disk drive. The text remains in memory after saving. If you supply a valid file name as a part of the command, the text is stored in that file.

When you don't supply a file name, WORDS needs to determine one. If the USE STANDARD FILE NAMES parameter is set to YES and you have used on of the person selections from the access menu, the text will be saved in a file with the standard name as described in section 11.2.

Whenever USE STANDARD FILE NAMES is set to NO or you selected "file I will name" from the access menu, you will be asked for a file name. When you supply a valid name, the text in memory will be saved in that file. If you decide you didn't want to save after all, you can use CTRL-Z in answer to the request for a file name to stop it.

Valid file names must start with a letter. They may contain any characters (including spaces) except commas and colons, and can be no longer than 16 characters.

11.3.3.19 The Top Command

The Top command changes the line pointer to the first line of the text in memory. That's usually line 1, unless it has been deleted or moved.

11.3.3.20 The View Command

The View command lets you look at one or more lines of your text on the screen. You would give it a line number or the range of line numbers you want to view. If you want to look at the entire set of lines, you would use "ALL" instead of line numbers.

For example,

V 2-8

shows lines 2 through 8 on your screen. The command

V ALL

shows everything in memory. If you use the ALL command when you have more text than can fit on the screen, it won't stop displaying until the last line is reached. You can stop the display with CTRL-Z.

11.3.3.21 The Write Command

The Write command causes all of the text in memory to be printed on you printer. If the QUICK PRINT parameter is set to 1, the line numbers will appear but no header will be added. Figure 25 shows some text printed using QUICK PRINT as 1. With the parameter set to NO, various other parameters will affect how the printing is done:

SIZE OF LEFT MARGIN
USE CUSTOM HEADER
LINES PER PAGE
SHOW ID AFTER NAMES
SHOW MARRIED NAME
USE PREVIOUS HEADER
TOP-OF-FORM AFTER PRINTS
SUBSTITUTE SPECIAL ID
TOP MARGIN
FIRST SHEET NUMBER
SPACE BETWEEN LINES

Please see section 11.3.6 for more details about the effects of those parameters. Figure 24 gives an example of normal printing done with WORDS.

Note that the SIZE OF RIGHT MARGIN parameter has no effect on printing. It is used in the "insert mode" to determine the length of a line for word-wrapping purposes. Similarly the RIGHT JUSTIFY command is only used when you issue the ALIGN command.

11.3.4 Showing the Files on a Diskette

When you select <B> from the WORDS main menu, you will be shown the list of files on any text diskette in a drive. This works exactly like the Directory command when you are working on text; please see section 11.3.3.4 for more information.

11.3.5 Formatting a Diskette

You may format a floppy diskette by selecting <C> from the WORDS main menu.

You will be asked for the drive for formatting with

```
FORMAT DISKETTE IN WHICH DRIVE (1-3)?
```

where the number of drives will match the number for your system, not our mythical one. After that you are prompted

```
PLACE THE DISKETTE TO BE FORMATTED INTO
DRIVE 2.  PRESS ANY KEY WHEN READY
```

The drive number in the message will correspond to your answer to the first question. Since formatting can cause you to lose anything that may be on the diskette, you are offered one final chance to back out with

```
THIS WILL ERASE EVERYTHING ON THE DISKETTE.
O.K. TO CONTINUE?
```

If you answer anything except <Y>, it will abort and return to the WORDS main menu. Answering <Y> causes the formatting to start, indicated by the

```
PLEASE WAIT...
```

```
FORMATTING
```

message on the screen. The main menu will appear when it finishes.

11.3.6 Changing the WORDS Parameters

There are twenty-one parameters that you can change from the CHANGE PARAMETERS menu that will affect certain ways the program operates and uses the printer. You get to this menu by pressing <D> from the WORDS main menu, pressing <P> from the access menu, or giving the Parameters command while in command mode.

William Vorenberg, known as Bill, grew up in Wagon Mound, NM. He was a sickly child when young, and missed a great deal of school.

He went to college at the University of New Mexico in Albuquerque, NM. He studied drama there and went on to pursue a teaching career in drama.

He was quite a teller of tales. One that sticks in my memory is the time he told one of his friends at college that his mother was an Indian. He also said that she sat beside the road selling Indian blankets. In fact his mother was nothing of the sort -- she and her husband ran the general store in Wagon Mound.

Bill was very widely travelled. He chaperoned student tours all over the world. He spent a great deal of time in Europe and had also been to Japan. He spoke Spanish, learned when he was a boy, and had a special fondness for Spain and South America. I remember a story he told of spending some time with a gypsy group in Spain, and drinking wine from a goat skin, getting it all over himself.

Bill taught drama at New York University for many years, and lived in Greenwich Village. I visited him for a week in 1961 when he was living in the Bronx. That was the only significant amount of time I ever spent with him.

Bill had a stroke in April of 1981 and never fully recovered. He decided to die, and achieved that by not eating. He died in Gig Harbor while visiting Ann Reynolds.

FIGURE 24. WORDS PRINTED OUTPUT

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He went to college at the University of New Mexico in Albuquerque, NM. He studied drama there and went on to pursue a teaching career in drama.

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Bill was very widely travelled. He chaperoned student tours all over the world. He spent a great deal of time in Europe and had also been to Japan. He spoke Spanish, learned when he was a boy, and had a special fondness for Spain and South America. I remember a story he told of spending some time with a gypsy group in Spain, and drinking wine from a goat skin, getting it all over himself.

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FIGURE 25. QUICK PRINT FROM 'WORDS'

A list of the parameters is displayed along with their current settings. You may change one by pressing the letter in front of the name in response to the WHICH question, e.g.

WHICH (A-U)? <B>

results in

SIZE OF RIGHT MARGIN?

If you specify a new value, the old value is replaced. If you respond with only a <'return'> the old value is preserved. You can change as many parameters as you like; each time you are returned to this menu. When you're finished, press <'return'> in response to WHICH.

The following parameters are available:

a) FIRST VISIBLE PARAMETER. This parameter's value is a letter between B and U. It affects how the CHANGE PROGRAM PARAMETERS menu (the one you're looking at now) appears. The reason for this parameter is that there are more program parameters than there are lines on the screen to show them. You can see a different selection of them by resetting this parameter. The starting value is always B, which means you can see parameters B through P on the screen in addition to A (always present). As an example, if you set this to M, you will see parameter A plus M through U on the screen. The default value of the 'First Visible Parameter' isn't available for resetting via MANAGER. Don't worry about pressing an illegal letter on this -- WORDS won't change anything if you do.

b) SIZE OF RIGHT MARGIN. The value for the right margin is in spaces and is normally 0. This parameter is not used in printing. Its value helps determine the length of a line when you are inserting or aligning text. The length of a line is set as the total physical length less the size of the left and right margins. Please see section 11.3.3.8 for more discussion about how this is used.

c) SIZE OF LEFT MARGIN. The default is 10 spaces. This affects printing of text and is used in the determination of the length of a line for inserting text. A left margin is used to allow space for binding your printed sheets.

d) DRIVE FOR TEXT FILES. The program will find any text diskettes when it starts running or when you tell it to check diskettes. If you forget to put a text diskette in a drive or there is none present for some reason, this parameters says where you want the

program to request it. The usual value is drive 1. WORDS will ask for the diskette when it needs it.

e) QUICK PRINT. This is normally set to NO. When it is NO, printed text will be formatted on the page, and a header will be attached. See Figure 24 for an example. When it is YES, printed text is only minimally formatted, and the line numbers are shown. See Figure 25 for an example.

f) USE STANDARD FILE NAMES. This is normally set to YES. When it is YES, you are not asked to supply the names of files that pertain to individuals from your data base. The files will be given standard names according to the rules described in section 11.2. When the parameter is NO, you will be asked to supply file names whenever a file is to be loaded from or saved to the text diskette. You would need to use the standard file names in order to be able to append the files to individual sheets printed by PERSONS.

g) LOAD FILE WHEN STARTING. This has a default of YES. When it is set to YES, the program will attempt to load a file as the first step when you have chosen "work on text" from the main menu. The file name will be determined by asking you or will be the standard name, depending on the setting of the USE STANDARD FILE NAMES parameter and your choice from the access menu. If no file is found with the appropriate name, there will be no text in memory when starting. Having the parameter set to YES allows you to give the fewest number of commands when you are using standard file names.

When the parameter is set to NO, a file is not loaded except when you give the explicit command to do so.

h) TAB BEFORE HEADER. This is the number of spaces used in front of any header and is provided for positioning purposes. Its normal value is 10.

i) USE CUSTOM HEADER. This parameter has an effect only when the QUICK PRINT parameter is set to NO. It defaults to NO. When it is set to NO and you are making text for an individual, a standard header containing the name of the person is printed. When it is set to YES, you will be asked a sequence of question to define a custom header. Those questions are exacly as described in section 5.4; please refer to that for more information. If there is a header in memory, the USE PREVIOUS HEADER parameter may affect the appearance of the questions.

j) LINES PER PAGE. This is the maximum number of lines that will be printed on each page and is normally 55. You would use this to

prevent printing from occurring on the very bottom and top of a page, i.e. to leave an inter-page gap. A page ejection is done by WORDS when this limit is reached. If you want the printing to run continuously, set this to zero.

k) SHOW ID WITH NAMES. This is normally set to YES and affects only the printing of the standard headers. When it is YES, the person's record or ID number is shown after the name. The choice of record vs. ID number is determined by the setting of the SUBSTITUTE SPECIAL ID parameter. No number is appended to the name in a standard header when the parameter is set to NO.

l) SHOW MARRIED NAME. This affects only the printing of the standard headers and is normally set to YES. When YES, a woman's married name is printed. When NO, her maiden name is printed. The parameter has no effect for single women.

m) USE PREVIOUS HEADER. The parameter only has an effect when the QUICK PRINT parameter is set to NO and USE CUSTOM HEADER is set to YES. Its default setting is YES. It is used to determine whether a custom header in memory will be printed without asking for verification.

n) TOP-OF-FORM AFTER PRINTS. The default is YES. This causes the printer to move the paper to the top of the next page whenver it finishes one complete printing task, i.e. printing one person's text. Ejecting pages like this makes for neater printing, but it can waste a lot of paper.

o) SUBSTITUTE SPECIAL ID. This parameter only has an effect when the USE CUSTOM HEADER parameter is set to NO and QUICK PRINT is set to NO. Its default is NO. This parameter won't have any effect unless you have a User Defined Field which has been designated (using the MANAGER) as containing an ID or Identification in the genealogical sense (see section 3.5 if you don't understand what that means). The parameter is also dependent on SHOW ID WITH NAMES; if the latter is set to NO, this one will not do anything.

   Assume the other parameters are set appropriately. When SUBSTITUTE SPECIAL ID is set to NO, either the record number or "(NO RN)" will be printed after each name in the standard header. If it is set to YES, then your ID number would appear there instead. If the person has no RN, then no ID would be placed after the name unless you included it as a part of the name itself.

p) TOP MARGIN. This parameter has an effect only when the QUICK PRINT parameter is set to NO and is normally 0. It is the number of blank lines to be printed at the top of a page before the standard

header appears, and at the top of each succeeding page of the printed text. The actual physical placement of the text on the paper depends on how you positioned the top of the paper in the printer.

q) FIRST SHEET NUMBER. The default is sheet (page) number 1. Sheet number will appear on the top of each page at the right. This occurs only when you have asked that the printing be broken for each page boundary rather than running continuously. You might change this if you intend to include the printed text in a book.

r) SPACE BETWEEN LINES. This is normally set to 0 for single spaced printing. When it is set to 1 or more, that many blank lines are printed between each line from the text in memory.

s) RIGHT JUSTIFY. This is normally set to NO. When it is set to YES, the right margin will be made even during alignment, i.e. when you use the ALIGN command (see 11.3.3.1). This parameter has no effect during the insert mode.

t) ACCEPT LONG LINES. This is normally set to NO. This parameter is intended to let you append text files from certain troublesome word processors. If you are using our WORDS program to make your text files, you won't need to change this.

When the parameter is set to NO, the usual BASIC method of retrieving a line of text from a disk file is used. Some word processors store their text in such long lines on the disk that the usual method doesn't operate correctly. By setting this parameter to YES, you will cause PERSONS to read the disk file character-by-character rather tan by line. With this change in method, PERSONS is able to break the long lines into smaller sizes as it reads them.

****

WARNING: Having the parameter set to YES will make appending text very slow.

****

u) DATE. The date is printed in the standard header. It is set from your answer to the date prompt or from the CONFIGURATION file. The value is first set at the time you boot, and any changes you make here will be preserved in any of the programs except LISTS and MANAGER.

11.3.7 Checking Diskettes

Don't switch diskettes unless told to do so or unless you can force WORDS to examine all the diskettes in the drives. The latter is available on the WORDS main menu by pressing <E>. We're repeating ourselves! Try section 5.5 if you need to see more.

11.3.8 Exiting WORDS

When you press <F> or <'return'> from the WORDS main menu, you get the exit menu with its four choices. Please consult section 4.7 for more information.

11.3.9 Miscellaneous Information on WORDS

This section collects some miscellaneous comments for ease of reference. Some of the comments correspond to what was said in the similar section on EDIT, 4.8. Here goes:

a) If you have an error that unceremoniously dumps you to out of WORDS into BASIC (you will see the "ready" prompt and an error message), you can often recover by typing GOTO 20000. This does not always work, since the internals of the computer may sometimes be so messed up that nothing short of powering off and on again will fix it. If the GOTO 20000 appear to work, it is advisable to do only what is necessary to save work in progress, since things may still be flaky.

b) A CTRL-Z for aborting works for most things but not others in WORDS. In particular you will not be able to abort a save to diskette since that would damage the file on diskette.

c) Any text stored in files with the standard names may be printed using PERSONS as described in section 7.3.

12. DETAILED USE OF MANAGER

Much of what you can do using the MANAGER program was discussed briefly in section 3 on getting started. This section covers some of those points in more detail now that you are more familiar with FAMILY ROOTS. Other features not described previously are also covered.

MANAGER is the program that manages the CONFIGURATION file on the program diskettes for you. That file tells each of the other programs

a) What equipment you have, where it is, and how to operate it.

b) How your diskettes are set up.

c) How you want the programs to operate, e.g. the date order to be used, nominal maxima, and other such items.

d) What your special fields are, plus whether you're using Auto Date or not.

e) What the starting values for all the program parameters are.

The MANAGER program allows you to access and change all of those values through a series of menus, and, in some cases, a sequence of questions and answers. Having access to the CONFIGURATION file in this way is a very powerful tool for you, since it allows you to customize FAMILY ROOTS to you own preferences and needs.

MANAGER resides on the Auxiliary Programs diskette and can be run by booting that diskette or by obtaining the programs menu after exiting any other program. No data diskettes are needed by MANAGER, so no pause for diskette switching is needed. In addition, MANAGER may be entered directly from the "ready" prompt by typing

```
LOAD"MANAGER",8
RUN
```

12.1 The MANAGER Main Menu

After a slight delay for setting up and reading the CONFIGURATION file, the main menu appears. It shows the following six choices:

A) SET HARDWARE CONTROLS
B) SET SYSTEM CONTROLS
C) SET PROGRAM PARAMETER VALUES
D) SAVE CONFIGURATION FILE
E) PRINT FILE CONTENTS
F) EXIT

You used A, B and D when you first set up your system. Items A, B and C expose additional menus to help isolate exactly what you want to change. Item D is used to save the CONFIGURATION file to all of your program diskettes, and item E can be used to make a listing of the current contents of your file.

At the bottom of the MANAGER main menu you will notice the question

WHICH (A-F/I)?

Choice I (meaning "index") is how you gain direct access to the CONFIGURATION file using the parameter indices (see Figure 26 a few pages ahead for a sample listing). If you use the I selection you're on your own since little guidance will be provided about the effects of any changes you make. Also, some parameters are coded in certain ways and you can cause severe problems for yourself by setting values that won't be recognized. These cautions are provided to make you wary of using this feature, but it is available if needed. In general you are much better off accessing any value through the menus and questions, since this provides proper formatting and checking for mistakes where needed.

If you get your CONFIGURATION file messed up, delete the file and run MANAGER--the program will re-create a good file in its memory, but you may have to reset the diskette formatting parameters before you are able to use your standard data diskettes.

12.2 Setting the Hardware Controls

The hardware menu appears when you select <A> from the MANAGER main menu, and shows the following choices:

A) SET PRINTER CONTROLS
B) SET DISK CONTROLS
C) SET DISPLAY CONTROLS

Selecting any of these results in a question and answer session to help define the needed parameters. Some of this was covered in section 3. Added details are provided in the following sections.

12.2.1 Setting The Printer Controls

Selecting <A> from the hardware menu initiates a series of questions that will let Family Roots know how to control your printer. Section 3.2.1.1 covers all of the essential details for those whose printer appears on the menu of printers. The missing information is how to answer the questions when you need to specify your own controls, started by selecting "do my own setup" from the menu of printers.

If you have one of the printers on the menu and find that our controls for it don't work, you will need to answer the control questions too. Almost all printers use strings of characters to control their sizes and the start (where needed). The ones you need will be stated in your printer's manual, but it is often not obvious at first how to type each character on the keyboard. Each character is defined in terms of a code (called PET ASCII) inside the machine. For example the capital letter A is encoded as the number 193 within the Commodore.

You can get code 193 into the machine by pressing the A key on your keyboard. Every other key has a code associated with it which can be stored by pressing that key. You must translate the requirements stated in the printer manual to what you must type on your keyboard.

Most of the problems arise in entering the first 32 PET ASCII codes (numbered 0 through 31) since they have three different names. Some printer manuals also make it difficult by assuming that you are writing a program, whereas in this case you only need to find the relevant strings of characters for entry via the keyboard. Let's consider an example. Your printer anual probably says you need an OPEN 4,4:CMD4 to activate the printer. You don't. That's already part of the FAMILY ROOTS program and is a program statement rather than a sequence of control characters.

Suppose your manual says you need to do a PRINT#4,CHR$(15) in order to set the print size to 17 characters per inch. Now we're getting somewhere! The PRINT is the program statement that pushes a sequence out to the printer, so the CHR$(15) is the way you would state within a program that you wanted to send a single character, PET ASCII 15, to the printer. What you need is to find a way to type the PET ASCII 15 on your keyboard so that the PRINT statement which already exists in the program can put it out to the printer. You type PET ASCII 15 by holding down the key marked CTRL at the left of the keyboard and simultaneously pressing the letter O key, called CTRL O. Why that one? The first 26 PET ASCII codes correspond one for one with the letters of the alphabet, and O is the 15th letter. Similarly CTRL A would be PET ASCII 1 and might be referred to in your manual as CHR$(1). When you type CTRL A on your keyboard, nothing shows on your screen, since there is no physical symbol associated with it; the same is true of the first 32 PET ASCII codes. Table 6 gives you the correspondence between ASCII codes, how they may be referenced in your printer manual, and how you type them on your keyboard. Whenever you type a sequence of codes into the MANAGER program, it shows it back to you by displaying the invisible PET ASCII codes as CHR$(15) (or whatever).

ASCII	TYPE	OTHER NAME	ASCII	TYPE	OTHER NAME
0	^	NULL	48	0	0
1	ctrl A	SOH	49	1	1
2	ctrl B	STX	50	2	2
3	ctrl C	ETX	51	3	3
4	ctrl D	ET	52	4	4
5	ctrl E	ENQ	53	5	5
6	ctrl F	ACK	54	6	6
7	ctrl G	BEL	55	7	7
8	ctrl H or ←	BS	56	8	8
9	ctrl I	HT	57	9	9
10	ctrl J	LF	58	:	:
11	ctrl K	VT	59	;	;
12	ctrl L	FF	60	<	<
13	ctrl M or RETURN	CR	61	=	=
14	ctrl N	SO	62	>	>
15	ctrl O	SI	63	?	?
16	ctrl P	DLE	64	@	@
17	ctrl Q	DC1	65	a	a
18	ctrl R	DC2	66	b	b
19	ctrl S	DC3	67	c	c
20	ctrl T	DC4	68	d	d
21	ctrl U or →	NAK	69	e	e
22	ctrl V	SYN	70	f	f
23	ctrl W	ETB	71	g	g
24	ctrl X	CAN	72	h	h
25	ctrl Y	EM	73	i	i
26	ctrl Z	SUB	74	j	j
27	ctrl [	ESCAPE	75	k	k
28	ctrl 3	FS	76	l	l
29	ctrl]	GS	77	m	m
30	ctrl 6	RS	78	n	n
31	ctrl 7	US	79	o	o
32	space	SPACE	80	p	p
33	!	!	81	q	q
34	"	"	82	r	r
35	#	#	83	s	s
36	$	$	84	t	t
37	%	%	85	u	u
38	&	&	86	v	v
39	'	'	87	w	w
40	(	(	88	x	x
41	)	)	89	y	y
42	*	*	90	z	z
43	+	+	91	[	[
44	,	,	92	£	£
45	-	-	93	]	]
46	.	.	94	n/a	^
47	/	/	95	←	←
48	0	0			

TABLE 6. PET ASCII CODES FROM THE KEYBOARD

We're not through all the complexities yet. There is another set of names for the first 32 codes; these names are used by some printer manuals instead of those described above. An example would be DC4 meaning PET ASCII 20 or CHR$(20) or CTRL T. Table 6 also shows these name correspondences. As described above, if your printer manual says you need a DC4, you must tell the program that by typing CTRL T.

The last problem in entering the right codes is that one of them, PET ASCII 0 can't be typed directly on the keyboard. We have supplied an alternate character which can be typed and will be interpreted as this code; this is also shown on Table 6. The program tells you where these can be used.

Now we can continue considering the questions asked by the program. The question about start characters for the printer may need explaining. A Paper Tiger printer needs a CTRL Q character (same as PET ASCII 17 or, in BASIC, CHR$(17)) in order to start the printing. You may not need these at all, or you may need others. For example, if PET ASCII 20 (same as CTRL T) controlled the line spacing, you might like to have that output every time the printer is activated. You would first say whether you needed any start controls. Assuming you needed some, you should then answer the questions about which control characters to start output by typing

CTRL Q

then

CTRL T

followed by pressing the 'return' key.

There is another set of printer characters to control character sizes, if your printer has that capability. You may choose up to four different sizes by specifying both the density (characters per inch) and the control sequence needed by the printer for that density. For example, the Paper Tiger printer uses PET ASCII 31 (CHR$(31)) for 16.5 characters per inch and PET ASCII 1 (CTRL A or CHR$(1)) for enhanced mode. If you wanted to use 8.25 characters per inch as one of your sizes, you would type the two characters

CTRL 7 CTRL A

where the CTRL 7 is the character recognized as PET ASCII 31 (CHR$(31)) as noted on your screen. This gets you the 8.25 density because enhanced mode doubles the width of each character. Some other printers use much different types of control sequences. For example some NEC printers use

CHR$(27)"Q"

to set up 16.5 characters per inch, which would be entered as !Q.

If you have multiple character sizes, you need to tell the program the size of each one, and the control sequence needed to do it. Character sizes are specified in terms of characters per inch, usually somewhere between 5 and 20; you need to find this information in your printer manual. It is O.K. to use a fractional size like 17.16. After you have specified each print size you must then select which one is normally used by your printer when it is first turned on. Most often this is 10 cpi (characters per inch) but some printers allow setting this to some other value using switches internal to the printer.

The next menu refers to the "line terminator" you need for your printer. Most printers only need the single character "line feed" (PET ASCII/10) to print each line separately, single spaced. If your printer is either running all of its lines together or double spacing the lines, you may need a different line terminator. The alternatives are a carriage return (PET ASCII 13) or both a line feed and a carriage return. You may choose the line feed, the carriage return, or both of them from the menu.

There are a few parameters in the CONFIGURATION file that affect printer operation but aren't set by any of the questions. You may change these using the I (index) choice from the MANAGER main menu; please see sections 12.7. The parameters are:

a) PHYSICAL LINES ON A PAGE - Index 31. This is the physical length of a sheet of paper, as opposed to the number of lines you want to have printed. The American paper standard is 11 inches long, printed at 6 lines per inch, resulting in 66 lines per sheet. If your paper or line spacing doesn't conform to that, you will need to set this parameter appropriately.

b) PRINTER ACCEPTS FF - Index 29. Some printers don't recognize the "form feed" (an ASCII 12) as one of their valid commands. For this type of printer, Family Roots will count the lines to the top of each page whenever a new page is needed. If you are having trouble with your printer not finding the top-of- form correctly, you should set this parameter to NO. Counting lines is a slower method of doing a top-of-form.

c) PRINTER USES SINGLE SHEETS - Index 39. Some printers are fed single sheets of paper at a time and need to have the programs pause while you insert the next sheet. Setting this parameter to YES will let you do that.

d) CONTROL PRINT BY SA - Index 11. A new trend among some printer manufacturers is to control the print size using a different

"secondary address" code for each size. The Seikosha is one of these that can be set by selecting it from the menu of printers. If your printer works like this, you will need to put the secondary address codes into indices 82 through 85, instead of the usual PET ASCII command strings. These other indices should be set by answering the sequence of questions from the "do my own setup" selection from the menu of printers, to assure that all related indices are set properly.

e) CODE FOR PRINTER COMMANDS - Index 12. This pertains to parallel interface devices and is normally set automatically by your selection of an interface from the menu. If you need to set this directly, it is the "secondary address" that provides "transparent mode" as specified by your interface manual.

f) CODE FOR NORMAL PRINTING - Index 13. This pertains to the "secondary address" needed either by your interface or your printer to achieve "cursor down" mode, i.e. upper/lower case printing rather than graphics. It is almost always 7, but may be changed if needed.

Here's one more piece of miscellaneous information related to printers. If you want to allow a right margin on your printed forms, you may want to set the printer paper width to less than its maximum. For example, if your paper is 8 inches wide, saying it is 7 inches wide will leave a 1 inch margin on the right. Be aware that the wide group sheet needs 120 columns in order to print, implying that setting the paper width in this way may make it impossible to print the form. Also be aware that the maximum width that your printer is able to use will be smaller than the physical width of the paper.

12.2.2 Setting Your Disk Drive Controls

Section 3.2.1.2 covered the essentials of setting your drives. We'll cover a few more points of interest here.

a) If you have more than 2 disk drives, you may find it convenient to specify that you have only 2 when you first start using Family Roots. This is because you must always have some diskette in every drive when each program begins, and you won't have many data diskettes when you first start.

b) If you have a dual drive disk unit referenced from a single device number, e.g. device 8, drives 0 and 1, you must set the CONFIGURATION file using "set by index" (see section 12.7) if the second drive is to be accessible to FAMILY ROOTS. The pertinent indices are 45 through 48. For single drive units these should always be 0 (zero). For a dual drive unit, you would need to

change the index corresponding to the FAMILY ROOTS drive number to 1 (one). For example, if you have one dual drive unit, you would tell MANAGER you have 2 drives, both device 8, via the disk drive questions. You would then set index 46 (corresponds to drive 2) to 1 via the "set by index". Please note that the program disk must always be used in device 8, drive 0. Also note that our DISKCOPY program does not use dual drive units.

12.2.3 Setting Your Display Controls

Section 3.2.1.4 provided the important details about setting your display. We'll give an example of the sequence of questions that is asked.

```
HOW WIDE IS YOUR DISPLAY, IN NUMBER OF
CHARACTERS (NOW '40')? <'return'>

ARE THE PRESENT COLORS FOR CHARACTERS,
BACKGROUND, AND BORDER O.K.? <N>

SELECT A COLOR BY HOLDING DOWN THE KEY
MARKED CONTROL OR THE ONE AT THE LOWER
LEFT OF THE KEYBOARD, WHILE PRESSING
ONE OF THE KEYS MARKED 1 THROUGH 8

WHICH COLOR FOR THE LETTERS? <CTRL-2> (white)
THIS LINE IS PRINTED IN THAT COLOR.

IS THAT OK? <Y>

WHICH COLOR FOR THE BACKGROUND? <CTRL-1> (black)
(The background will blink in the requested color here.)

WAS THE BACKGROUND JUST SHOWN O.K.? <'return')
(Background color now changes to what you requested.)

WHICH COLOR FOR THE BORDER? <CTRL-1> (black)
(Border blinks in the requested color.)

WAS THE BORDER JUST SHOWN O.K.? <Y>
```

You will be back to the hardware menu after that, with the screen in your selected colors.

12.3 Setting Your System Controls

When you select <B> from the MANAGER main menu, you get another menu of 6 items:

A) DEFINE USER FIELDS
B) SET MAXIMA
C) DEFINE DISKETTE FORMATTING
D) SET FUNCTION KEY VALUES
E) SET MISCELLANEOUS VALUES

These generally pertain to broader issues in the operation of the programs, i.e. they affect more than one program. The following sections will examine the questions and menus exposed by each of those choices.

12.3.1 Defining Your User Fields

A "user field" refers to the title and accompanying space for some family datum, examples being SEX, OCCUPATION, RELIGION, and BURIAL DATE. You do not need to define all of the fields you will be using, since many of the usual fields are pre-defined for you -- please see Table 5 (in section 4) for a list of these fields. The types of data for which you define one of these fields should normally apply to a large number of individuals in your family. The reason is that you have the NOTES fields for storing special items that apply to only one or a few people.

When you choose <A> from the System Controls menu, you will be asked a series of questions to define field labels, their types, and their interrelationships. You can do this at any time. However, if you change a field from one meaning to something unrelated, be aware that any data entered under the old meaning doesn't vanish--you must erase it or move it yourself. For example if you changed the first user field label from DATE OF BURIAL to SEX, any dates saved there previously would now appear labelled as SEX until you change them.

First you are asked how many of your own fields you want. This may be anything between 0 and 9. If you press <'return'> in answer to the question, the old value will be preserved, but the questions keep coming. This allows you to change the label, type, or relationship if needed. This is the total number of fields you want, not the number you want to add to what you had before. For example, if you currently have 1 field and want to add 2 more, you would answer the question with <3>.

Next comes a set of 2 questions for each field, e.g. a total of 6 questions if you said you wanted 3 fields. The first questions sets the title:

```
WHAT TITLE DO YOU WANT FOR FIELD 1
(NOW 'SEX')?
```

You can redefine a title from something like

```
DATE OF BURIAL
```

to

```
BURIAL DATE
```

with no impact. That's because the title is only stored in the CONFIGURATION file, not in your data. Please keep in mind that only the first 3 letters of field titles are used in printing many of the forms when you choose the title. For example, of the above two titles, BURIAL DATE would be preferred since it would show on the forms as BUR; the first would show as a mysterious DAT.

If the title shown to you is adequate, you don't need to reenter it--pressing **<'return'>** will preserve the former value. If you choose a title with more than 10 characters, you will be reminded that the title is somewhat long, and given a chance to reenter it. You may use long field titles if you wish, but if you do so, some of the FAMILY ROOTS outputs may not appear very neat.

After defining each title, you must then say what kind of field it is--free-form, date, person, or number. Examples of each are as follows:

a)	free-form:	PLACE OF BURIAL
		PLACE OF CHRISTENING
		SEX
		OCCUPATION
		RELIGION
		SPECIAL ID
b)	date:	DATE OF CHRISTENING
		DATE OF BURIAL
		SEALING DATE
c)	person:	GODFATHER
		GODMOTHER
d)	number:	NUMBER OF ADDRESSES

If in doubt, select "free-form" since there is no special checking done on such a field. Date fields follow the rules and methods set forth in

section 4.3.4, and person fields are interpreted as discussed in 4.3.6. Number fields only have a special interpretation in the SEARCH program. When you define your own number field, it does not expose added fields like the standard NUMBER OF MARRIAGES, NUMBER OF CHILDEN and NUMBER OF NOTES field do.

The question on type of field looks like

```
WHAT TYPE OF FIELD IS 'SEX':
 A) FREE-FORM
 B) DATE
 C) PERSON
 D) NUMBER
(NOW FREE-FORM)

WHICH (A-D)?
```

You indicate your choice by pressing the letter showing in front of the appropriate type, A through D.

After all of your fields are defined using the above, you are shown the list and asked for the relations between them, if any. No relationships is a valid situation. What is needed here is the linking of fields like BURIAL DATE and BURIAL PLACE. Linking of fields will cause them to be printed on the same line in the free-form charts and narrow group sheet, will cause them to be printed together on the individual sheets, and will allow the Burial Place and Christening Place fields to be printed on the wide group sheet.

You can see the results of each entry on the screen after doing it and can make corrections as necessary. A sample set of questions of linking might look like

```
ARE ANY OF YOUR FIELDS ASSOCIATED WITH
EACH OTHER (EXAMPLE: BURIAL DATE AND
BURIAL PLACE)? <y>

YOUR FIELDS ARE:

A) SEX
B) BURIAL DATE
C) BURIAL PLACE
D) OCCUPATION

WHAT IS THE LETTER (A-D) IN FRONT
OF THE FIRST FIELD? <B>
```

```
WHAT IS THE LETTER (A-D) IN FRONT
OF THE SECOND FIELD? <C>

YOUR FIELDS ARE:

A) SEX
B) BURIAL DATE (POINTS TO C)
C) BURIAL PLACE
D) OCCUPATION

WHAT IS THE LETTER (A-D) IN FRONT
OF THE FIRST FIELD? <'return'>
```

Note the appearance of the "points to C" as a result of the choices of the first and second fields of the pair. One word of caution is needed here: don't link fields circularly, i.e. in the example cited, don't have BURIAL DATE pointing to BURIAL PLACE and BURIAL PLACE pointing to BURIAL DATE at the same time. Pressing 'return' makes it stop asking for more linking.

If you make a mistake in your entries, select DEFINE USER FIELDS and run through the questions again. It can be done very quickly because 'return' preserves values you don't want to change.

Before you are returned to the Systems Controls menu, you will see a short pause. MANAGER is examining your field titles at this point to identify certain fields if they are present, namely, SEX, BURIAL, CHRISTENING, and ID. Under most circumstances, it should find them without any difficulties or further action on your part. If you have any of those fields, it is important that they be found by MANAGER if some of the parameters are to work correctly and if some of the forms are to print correctly. The most likely problem cases are where you don't include "ID" somewhere in your special ID field title, and when you name a field "Baptism" rather than "Christening".

If you are experiencing problems related to any of the fields mentioned above, you may want to set the location parameters directly. These must be changed using the "set by index" feature described in section 12.7. The pertinent indices are 59 through 62. To set these, first make a printout of your CONFIGURATION file contents by selecting E from the first menu in MANAGER. Next, locate the parameter name having the problem in indices 86 through 94. The correct setting for the corresponding index 59 through 62 is the index of the field title minus 74. For example, if you have a special ID field shown in index 88 (regardless of what the actual field title is), the value of index 60 (the locator for the special ID field) should be 14, computed as 88-74.

12.3.2 Setting the Maxima

Selecting <B> from the System Controls menu results in a menu showing a selection of parameters on the screen. All of the parameters are maxima. They are the "master controls" for Family Roots. Any attempt to use a larger number of items than shown here will cause a program to reject your entry. The solution, if you want to insist, is the change the parameter here that controls the situation. For example, if you want to enter 17 children in somebody's record but the MAXIMUM NUMBER OF CHILDREN on this menu is set to 15, you would have to increase this to 17 or larger in order to accomplish your goal.

These maxima only affect the way the computer's memory is used. They do not affect the amount of storage used on a diskette. For example, if you have the MAXIMUM NUMBER OF NOTES set to 5, and store 2 notes in somebody's record, space for only 2 notes is used on the diskette, not 5. There would not even be any overhead on the diskette for those other 3 notes.

The maxima on this menu are

MAXIMUM NUMBER OF NOTES
MAXIMUM NUMBER OF CHILDREN
MAXIMUM NUMBER OF MARRIAGES
MAXIMUM NO. OF GENERATIONS
MAXIMUM NUMBER LIST SIZE
MAXIMUM LINES IN 'WORDS'

If you examine the Configuration File Contents report, you may see three parameters called "maximum generations". The one on this menu is the "boss". If the others try to exceed this one, they are reset to this. If you need to do 15 generation charts and this "maximum generations" is set to 10, you will need to set it larger.

If you are not intending to use the WORDS program, you should set the last parameter small or zero. This will allow the memory space to be used for better purposes.

MAXIMUM NUMBER LIST SIZE is the maximum number of RN's that can be stored in the computer's memory when you specify a Number List or Name Set from the Access Menu (see section 4.3.1). It is also used in constructing the Compressed pedigree chart in STRUCTURES. It has nothing to do with the maximum number of names in memory in the LISTS programs; that number is set automatically by using almost all of the available memory and cannot be set directly by you.

12.3.3 Defining Your Diskette Formatting

The series of questions initiated by selecting <C> from the System Controls menu defines how the space on your standard data diskettes will be used. The choices are the maximum characters per person, the average length of a name, and the space available on each diskette. Please refer to section 3.2.2.1 for details.

There are two other diskette formatting parameters that are calculated automatically based on the above selections: NAMES STORED TOGETHER (index 36) and CUSHION FOR NAMES (index 38). Before version 3.0, these too would have been set based on answers to questions. If you are upgrading from a version before 3.0, there are occasions when you will need to set these two parameters rather than use the calculated values. The means for setting them yourself is the "by index" feature, described in 12.7.

12.3.4 Setting Your Function Keys

The "permanent" settings for your function keys (F1 through F8 on your keyboard) may be set by selecting <D> from the System Controls menu. This was covered in section 3.2.2.2. The important consideration here is the difference between "permanent" and "temporary". A permanent setting of a key will always be available, whereas a temporary setting must be made within EDIT every time you enter that program.

12.3.5 Setting Miscellaneous Values

When you select <E> from the System Controls menu, you will get a list of parameters that pertain to how the system operates. These are briefly described below:

a) DAY/MONTH ORDER. This is the storage order for standard dates. If the value is YES, dates are stored in day/month/year order. If it is NO, the order is month/day/year. See 3.2.2.2 and 4.3.4 for more details.

b) AUTO DATE USED. This controls whether the Auto Date field will be active in you data. When it is set to YES, the current date is inserted into a person's record every time you change it. When it is NO, the space can be used for other purposes. Please see 3.2.2.2 for more details.

c) FOOTNOTE CHARACTER. This character appended to any field indicates a footnote reference follows. If it is the first character of any note field, it indicates the information is a source citation. Commonly used values are the (↑) and the asterisk (*). If you change it after having used it in your data, the programs may not be able to interpret the data properly.

d) SEPARATOR IN NAMES. This is the character used to keep the First Names, Last Name at Birth, Married Name, and Title separated when each name is stored on a diskette. Since it is a separator, this character should be one that will never appear in one of your names. If you change it after having stored some names, the programs would not be able to read the names properly.

e) LARGEST NUMBER. This is the largest RN that may be used. It must be an integer (no decimal point in it). We set it as large as the computer will allow; it isn't possible to set it any larger unless your computer has some special hardware to allow it. You could set it smaller if you wished, but we see no reason to do so.

f) MAX. NAMELIST MEMORY PAGES. Names are stored on your standard data diskettes in sets, usually 15 per set. These sets are called pages. Only a few of these pages may be in the computer's memory at any one time. The maximum number of pages allowed in memory at once is controlled by this parameter. If you set it larger, you may experience less disk drive activity. If you set it too large, you will experience lengthy pauses while the computer tries to clear out characters not being used at the moment. It is set automatically when you answer the "diskette formatting" questions to allow a total of about 75 names in memory at once. It should not be set smaller than 2.

g) FIRST TWO YEAR DIGITS. If you enter a year as only 2 digits, EDIT will prefix them with the value of this parameter. Please see section 4.3.4 for more information.

h) PROMPT FOR DATE. When this parameter is set to YES, you will be asked for the current date whenever the START program is run, whether by booting or by a direct "RUN" after loading START. If you set it to NO, you will need to remember to set the date properly on one of the Change Program Parameters menus each time you run a program.

i) DEFAULT DATE. This is the date that will be used on printouts and for the Auto Date entry when no other date is available. If this date is empty, then DATE will not appear on any Menu of Program Parameters, i.e. setting this empty disables date processing. When not empty, this usually contains either the year, or something like DD-MMM-YY as a reminder to yourself to set it in case you forget.

j) ACCEPT LONG LINES. This is normally set to NO. It affects whether input from text files is done character-by-character or line-by-line. The NO setting selects the line-by-line and is faster <u>if it works properly</u>. The YES setting will work for all files but is much slower.

12.4 Setting the Program Parameter Values

You can set the default or starting value for the parameters peculiar to each program by pressing <C> from the MANAGER main menu. You will get another menu that looks like

A) SET COMMON VALUES
B) SET EDIT VALUES
C) SET FREE-FORMS VALUES
D) SET STRUCTURES VALUES
E) SET GROUPS & PERSONS VALUES
F) SET LISTS VALUES
G) SET WORDS VALUES
H) SET SEARCH & UTILITIES VALUES

Choosing any one of those will cause a list of parameters and their values to be shown on the screen. Any values you change here become the "usual", "default", or "permanent" values referenced in the sections for each of the Family Roots programs. Therefore our statements in the manual may be incorrect after you have changed any of the values.

Some of the parameters aren't independent for each program. Examples are the SIZE OF LEFT MARGIN and the TOP-OF-FORM AFTER PRINTS. Those that aren't independent are included in the list you will see when you choose <A> from the Program Parameters menu above. The parameters that are specific to a program are included in the lists exposed by selecting the menu item showing the program name. For example, if you choose <B>, you will see a list of the EDIT parameters that were described in section 4.6.

Some, but not all of the Utility programs also have a menu of parameters. For those that do, most of the parameters are in the list of common ones. There are a few unique parameters which can be set using the last choice, <H>. Please see section 13 for information about the Utility programs.

12.5 Saving the CONFIGURATION File

You would select <D> from the MANAGER main menu to save the CONFIGURATION file to your program diskettes. Any changes you make in the Configuration don't become permanent until you do this. The file should be saved to all of the copies of your program diskettes, the Main and Auxiliary. If there are program diskettes with new utilities added in the future, the file should be saved on them as well. You shouldn't save the file on the original program diskettes you got from us; they should be put away for safe-keeping.

When you make this selection, MANAGER tells you that the file goes on the program diskettes only, and asks you which drive to save it on. The answer is a drive number followed by 'return'. After each answer it will ask the same question again to give you the opportunity to save the file on the other program diskettes. When you have saved it everywhere, press <**'return'**> to get back to the MANAGER main menu.

If you attempt to save the CONFIGURATION file on a data diskette, you will get a warning that it goes on program diskettes only. The message suggests that there is a way to put the file there, and indeed there is, but you would have to go through several steps to do it. We're not going to tell you how since you could damage your data by doing so. If you continue to give the same answer, nothing bad will happen, but the file won't be saved.

12.6 Printing the CONFIGURATION File Contents

You can make a listing of the CONFIGURATION file contents by pressing <**E**> from the main menu. Your printer parameters must have been defined before you can do this. An example is shown in Figure 26. The index value appearing at the left is the count of the item in the file. If you use the I selection from the main menu (see previous cautionary statements in 12.1), it is this index that you use. The next column shows the current value in your computer's memory--it isn't in the file until you've saved it on your program diskette if any changes were made. The third column provides a brief description of the parameter.

You will probably not need to make such a listing under normal circumstances. It is available to help diagnose problems. Note that some fields are packed or coded; for example, two digits appear at the end of each user field definition.

12.7 Setting the CONFIGURATION by Index

If you press <I> from the MANAGER main menu, you will have the opportunity to change items in the CONFIGURATION file by providing an index number followed by a value for the parameter. We don't encourage new users to try this, as you can get into trouble. When you change anything by index, you have very little protection against making mistakes. If you get here by mistake, press <**'return'**> to go back to the main menu.

After selecting the change by index, you will get a warning and message

```
     USE OF THIS OPTION IS UNWISE UNLESS
     YOU KNOW EXACTLY WHAT YOU ARE DOING.
**************************************************************************
NOTE: PRESSING 'RETURN' FOR A NEW VALUE DOES NOT PRESERVE ITS PREVIOUS
      SETTING.
**************************************************************************
```

That last sentence means exactly what it says. If you try looking at a setting for a parameter from here, you will have to reenter it. Pressing 'return' will wipe anything out.

You will next be asked

```
CHANGE WHICH INDEX?
```

When you give an answer, you will be shown the parameter name and current setting. For example,

```
CHANGE WHICH INDEX? <23>

USEABLE PAPER WIDTH IN INCHES
OLD VALUE IS 8
```

You are then prompted

```
NEW VALUE:
```

This will continue until you press 'return' in answer to the "change which variable" question to get back to the MANAGER main menu.

12.7.1 Setting Miscellaneous Parameters by Index

There are some parameters that can only be set using the index. You will probably not need to set them at all, since they would usually be set properly. Here is a list of some you may want to know about:

a) SCREEN LENGTH - Index 21. This is the physical number of lines on your display screen.

b) VERSION NUMBER - Index 43. This is set by us. If you set it smaller, you will be surprised by the messages you get when you boot.

c) ESCAPE - Index 111. This is set to CTRL-Z by us. If you like ESC, or some other key, you might try using that. You could set this parameter to anything you want, but some values (for example the letter A) might give you more trouble than it's worth.

d) VERTICAL BAR - Index 110. This is set to the exclamation point "!". It is the character used to draw the vertical lines in the freeform and standard charts. If your printer accepts the "¦" symbol, you may wish to change this.

e) LABEL FOR RN - Index 112. We set this to "rn". It is the label used after names in printing the record numbers, e.g. JOHN SAVAGE (rn=82). It is also used to determine the standard text file names

for PERSONS and WORDS. You may prefer upper case "RN" or something else entirely, e.g. "ID" if you have no special ID field.

f) LABEL FOR ID - Index 113. We set this to "id". It is the label used after names when you print a special ID, e.g. JOHN SAVAGE (id=3.2.1-A). You may prefer upper case or a different label altogether, e.g. "CODE". Please see section 3.5 for information on what an ID is, and section 12.3.1 on how a special ID field is defined.

g) TEXT FILE SUFFIX - Index 95. The standard text file name as discussed in section 11.2 has three components: 1) the prefix, as defined by LABEL FOR RN described above; 2) the record number, and 3) an optional suffix, as defined by this parameter. If this parameter is empty, no suffix is assumed. You may wish to use a suffix to distinguish among different forms of the same file, or to identify your files more clearly as belonging to FAMILY ROOTS. More parameters that you may want to set "by index" are discussed in sections 12.2.1 and 12.2.2.

12.7.2 Setting Field Orders

The selection of which fields to use and their order of appearance can be made for the free-form charts, the individual sheets, and the narrow group sheet. We apologize for not having a nice menu for doing this task--there wasn't enough spare memory left in MANAGER to do it that way.

There are four parameters related to field orders which you may set "by index":

CHART FIELD ORDER - Index 104
GROUP FIELD ORDER - Index 106
PERSON FIELD ORDER - Index 105
SHORT FIELD ORDER - Index 107

The first applies to both the pedigree and descendants charts in the free-form style, the second applies (only) to the narrow group sheet, and both of the last two apply to individual sheets. The USE SHORT FORM parameter in PERSONS allows switching between the last two selections.

Each of the four field order definitions must consist of a string of lower case letters. Table 7 shows what each letter means when used in a field order. For example, including g anywhere in your PERSON FIELD ORDER says you want the FATHER field printed in that relative location in the sheet. If you duplicate a letter, the field will be printed more than once. If you include invalid characters, they will be ignored, but their presence may slow down printing somewhat. If you want to reset one of these parameters to our default setting, make it empty by pressing 'return'; that is an invalid setting which will be corrected upon your return to the MANAGER main menu.

For This Field or Set of Fields	Include this lower case letter in your field order
Birth	a
Death/Living	c
Father	g
Mother	f
Marriages	h
Children	i
Notes	j
Auto Date	k
Blank Line	e
User Defined Field	l through t, in the order of definition

FIELD ORDER LETTER SELECTION

Table 7

Here are a few examples of field order selections:

ahc - Birth, marriage, death fields, in that order
gfi - Parents and children fields
acl - Birth, death, and sex field if the first user field is SEX.
ekahcigf - blank line, auto date, birth, marriage, death, children, father, mother.

12.8 Exiting the MANAGER

Exiting the MANAGER is nearly the same as in EDIT, with the same choices. Please see section 4.7 for details.

CONFIGURATION FILE CONTENTS July 1987

INDEX	CURRENT VALUE	DESCRIPTION
1	2	PRINTER TYPE
2	4	PRINTER DEVICE
3	5	CHARACTER COLOR
4	6	BACKGROUND COLOR
5	4	BORDER COLOR
6	32	INDEX TO DEFAULT CHARACTER SIZE
7	8	INDEX TO DEFAULT CHARACTER CONTROL
8	1	NUMBER OF DISK DRIVES
9	1	DISK DEVICE # HARD WIRED
10	2	NUMBER OF PRINT SIZES
11	no	CONTROL PRINT BY SA
12	5	CODE FOR PRINTER COMMANDS
13	7	CODE FOR NORMAL PRINTING
14	26	AVERAGE NAME LENGTH
15	664	SECTORS AVAILABLE ON ONE DISK
16	254	CHARACTERS PER PERSON
17	10	MAXIMUM NUMBER OF NOTES
18	15	MAXIMUM NUMBER OF CHILDREN
19	7	MAXIMUM NUMBER OF MARRIAGES
20	10	MAXIMUM NO. OF GENERATIONS
21	24	SCREEN LENGTH
22	39	SCREEN WIDTH - 1
23	8	PAPER WIDTH (INCHES)
24	99	MAXIMUM NUMBER LIST SIZE
25	yes	DAY/MONTH ORDER
26	yes	AUTO DATE USED
27	25	LENGTH OF 'LONG LINE'
28	536870912	LARGEST NUMBER
29	yes	PRINTER ACCEPTS FF
30	yes	PROMPT FOR DATE
31	66	PHYSICAL LINES ON A PAGE
32	10	CHARACTER PER INCH VALUE
33	16.5	CHARACTER PER INCH VALUE
34	0	CHARACTER PER INCH VALUE
35	0	CHARACTER PER INCH VALUE
36	15	NAMES STORED TOGETHER
37	5	MAX. NAMELIST MEMORY PAGES
38	118	CUSHION FOR NAMES
39	no	PRINTER USES SINGLE SHEETS
40	53	LINES PER PAGE
41	40	MAXIMUM LINES IN 'WORDS'
42	10	NUMBER OF SEARCH LIST ITEMS
43	3	VERSION NUMBER
44	1	NUMBER OF USER-DEFINED FIELDS
45	0	DRIVE # FOR 1
46	0	DRIVE # FOR 2
47	0	DRIVE # FOR 3
48	0	DRIVE # FOR 4
49	8	DEVICE FOR DRIVE 1

FIGURE 26.

FAMILY ROOTS

INDEX	CURRENT VALUE	DESCRIPTION
50	9	DEVICE FOR DRIVE 2
51	10	DEVICE FOR DRIVE 3
52	11	DEVICE FOR DRIVE 4
53	0	INTERFACE TYPE
54	0	SPARE
55	49152	SYS ADDRESS
56	49155	SYS ADDRESS
57	49158	SYS ADDRESS
58	49161	SYS ADDRESS
59	12	SEX FIELD INDEX
60	0	ID FIELD INDEX
61	0	BURIAL FIELD INDEX
62	0	CHRISTENING FIELD INDEX
63	0	SPARE
64	no	ACCEPT LONG LINES (SLOW!)
65	0	SPARE
66	0	SPARE
67	0	SPARE
68	0	SPARE
69	0	SPARE
70	0	SPARE
71	0	SPARE
72	0	SPARE
73	0	SPARE
74	0	SPARE
75		PRINTER START CONTROL
76		SPARE
77	1987	DEFAULT DATE
78	!	FOOTNOTE CHARACTER
79	%	SEPARATOR IN NAMES
80	19	FIRST TWO YEAR DIGITS
81	CHR$(10)	LINE TERMINATOR
82	CHR$(18)+CHR$(20)	CONTROL FOR CHARACTER SIZE
83	CHR$(15)	CONTROL FOR CHARACTER SIZE
84		CONTROL FOR CHARACTER SIZE
85		CONTROL FOR CHARACTER SIZE
86	SEX00	USER DEFINED FIELD
87		USER DEFINED FIELD
88		USER DEFINED FIELD
89		USER DEFINED FIELD
90		USER DEFINED FIELD
91		USER DEFINED FIELD
92		USER DEFINED FIELD
93		USER DEFINED FIELD
94		USER DEFINED FIELD
95		TEXT FILE SUFFIX
96		FUNCTION KEY 1
97		FUNCTION KEY 2
98		FUNCTION KEY 3
99		FUNCTION KEY 4
100		FUNCTION KEY 5

FIGURE 26 (cont'd)

INDEX	CURRENT VALUE	DESCRIPTION
101		FUNCTION KEY 6
102		FUNCTION KEY 7
103		FUNCTION KEY 8
104	ahcilmnopqrstj	CHART FIELD ORDER
105	kegfahclmnopqrstij	PERSON FIELD ORDER
106	ahcgflmnopqrst	GROUP FIELD ORDER
107	gfi	SHORT FIELD ORDER
108		SPARE
109		SPARE
110	!	VERTICAL BAR
111	CHR$(26)	ESCAPE
112	rn	LABEL FOR RN
113	id	LABEL FOR ID
114		SPARE
115	yes	SHOW SIZE AFTER EACH INPUT
116	yes	DO COMPLEMENTING
117	yes	UNCONDITIONAL SUBSTITUTION
118	yes	ENTER SPOUSE'S CHILDREN
119	yes	COMPLEMENT ADDRESS
120	yes	ADD NAMES SEQUENTIALLY
121	1	NEXT NAME ID
122	1	STEP START NUMBER
123	yes	SAVE LAST ID ON EXIT
124	yes	USE STANDARD FILE NAMES
125	yes	LOAD FILE WHEN STARTING
126	0	TOP MARGIN
127	0	FIRST SHEET NUMBER
128	0	SPACE BETWEEN LINES
129	yes	USE MONTH NAMES
130	7	MAXIMUM GENERATIONS
131	yes	SHOW ID AFTER NAMES
132	yes	TOP-OF-FORM AFTER PRINTS
133	10	SIZE OF LEFT MARGIN
134	no	SUPPRESS NOTES ON CHARTS
135	0	NUMERIC HEADER CODE
136	no	SHOW EMPTY FIELDS
137	no	USE LAST NAME FIRST
138	no	SHOW NAMES ONLY
139	no	CASCADE STANDARD CHARTS
140	no	SELECTIVELY SUPPRESS NOTES
141	no	SHOW MARRIED NAME
142	10	TAB BEFORE HEADER
143	no	USE CUSTOM HEADER
144	0	LINES PER PAGE
145	yes	USE PREVIOUS HEADER
146	no	APPEND 'TEXT' FILE
147	no	PUT CHILDREN IN ORDER
148	no	USE ALL CHILDREN
149	no	OMIT SOURCES/NOTES
150	no	FIND APPROXIMATE YEARS
151	no	SUBSTITUTE SPECIAL ID

FIGURE 26 (cont'd)

FAMILY ROOTS

INDEX	CURRENT VALUE	DESCRIPTION
152	yes	SEND LIST TO PRINTER
153	no	SAVE MERGES ON DISK
154	yes	USE MAIDEN NAME
155	no	USE MARRIED NAME
156	no	SHOW UNUSED RECORDS
157	yes	SHOW LAST NAME FIRST
158	100	SCREEN SPEED (1-100%)
159	no	ABLE TO ABORT ALPHA
160	no	SEARCH TITLE WITH SOUNDEX
161	yes	MERGE AUTOMATICALLY
162	5	NAMES PER GROUP
163	no	IGNORE UPPER/LOWER CASE
164	no	PRINT EXTRA FIELD
165	0	SIZE OF RIGHT MARGIN
166	17	PRINT SIZE
167	17	PRINT SIZE
168	10	PRINT SIZE
169	yes	PRINT EMPTY FIELDS
170	no	USE FLAGGED NOTES
171	no	SHOW NAME ONLY
172	0	FIRST SHEET NUMBER
173	5	MAXIMUM GENERATIONS
174	yes	USE OVERLAY FORMAT
175	no	NUMBER STANDARD CHARTS
176	no	OMIT WIFE'S MARRIAGE
177	no	QUICK PRINT
178	no	RIGHT JUSTIFY
179	1	DRIVE FOR TEXT FILES
180	yes	USE LINE BETW. GENERATIONS
181	yes	ASK WHICH MARRIAGE
182	0	FIRST LINE NUMBER
183	no	USE FULL ADDRESS
184	no	OMIT ALTERNATE PARENT
185	no	INSERT PARENT FIRST
186	no	INSERT SPOUSE DATA
187	yes	USE JOINED LINES
188	no	USE SUPPLIED SURNAMES ONLY
189	0	LINES BETWEEN LABEL TOPS
190	no	OMIT TELEPHONE NUMBER
191	yes	ASK TO ERASE DISK
192	0	COLUMN FOR EXTRA FIELD
193	0	NUMBER OF COLUMNS
194	0	SPARE
195	0	SPARE
196	0	SPARE
197	0	SPARE
198	0	SPARE
199	0	SPARE
200	0	SPARE

FIGURE 26 (cont'd)

13. USING THE UTILITIES

At this time there are seven utilities: WHAT, CREATE, RENUMBER, ADDRESSES, READER, EMPTIES, and CHANGER. Each will be described in a separate section below. A program qualifies as a utility if it is either small or performs some special function not in the genealogical mainstream. Thus MANAGER, described in sections 3 and 12, is also a utility. The utilities are all on the Auxiliary Program diskette, except for CHANGER, which is sold separately.

13.1 The WHAT Utility

We hope that name doesn't cause problems if you talk to somebody about this--it could be an old Abbott and Costello routine repeated.

Anyway ... WHAT will tell you the supposed identity of any diskette. We say "supposed" because it is possible to mess up a diskette. This is one way to find out. You could also use this to find out the proper number for a standard data diskette in case you forgot to label it. You execute WHAT by selecting it from the programs menu.

When it starts, WHAT asks you which drive to check. It then reads the control file on the diskette in that drive and will say the diskette is one of four types:

a) a program diskette
b) a text diskette
c) a standard data diskette
d) not a FAMILY ROOTS diskette

If it is a standard data diskette, you also get the following information:

1) the diskette number
2) the number of people per diskette
3) the average name length
4) the space available on an empty diskette
5) the characters per person
6) the number of names stored together
7) the cushion for names

You will usually not be interested in the second through seventh items. They are provided in case FAMILY ROOTS rejects a diskette due to incorrect parameters. These parameters must agree with the CONFIGURATION FILE before the programs will accept any data diskette.

After getting the information for one diskette you may ask for another drive, or you may switch diskettes and analyze another in the same drive. Press <'return'> in answer to the question to exit WHAT.

13.2 The CREATE Utility

CREATE makes empty standard data diskettes. Any time you need a new standard data diskette you must either run CREATE to make one or copy an empty one made previously with CREATE. The diskette number is assigned when you first use the empty diskette with the EDIT program. The diskette will be formatted by CREATE.

You execute CREATE by selecting it from the programs menu. CREATE then tells you to insert the diskette to be created in drive 1. There's nothing more for you to do after that except note progress on the screen. See section 3 for more details on how and when to use CREATE.

13.3 The RENUMBER Utility

RENUMBER allows you to reassign the record numbers for people on your diskettes. You may reassign numbers or may redefine an entire diskette's identity. You execute RENUMBER by selecting it from the programs menu. PLEASE: be sure you have made backups before you start this; it's easy to make a mistake and wipe out something valuable.

When RENUMBER starts, you're asked

```
A) MOVE INDIVIDUAL RECORDS
B) MOVE BLOCKS OF RECORDS
C) RENUMBER WHOLE DISKETTE
WHICH (A-C)?
```

If you choose the first, you will need to supply pairs of old and new numbers. If you select the second, you are asked for a range of RN's to move and the starting RN where you want to put them. If you select the third, you will need to define a new diskette number and say which diskette. In all cases you may need your ENTIRE set of data diskettes since numerous records must be checked for appearances of the old record numberd. Obviously this is not an operation you will undertake lightly or with only a few minutes to spare.

13.3.1 Moving Individual Records

When you select A, you are asked

```
VERIFY THE RN'S?
```

If you answer <Y>, the name for each number in the pairs you are about to supply will be shown to you before the number is accepted. This will probably entail some switching of diskettes to retrieve the names. An example sequence could be

```
OLD NUMBER?     <822>
THAT IS THE RN FOR
JAMES M. FREEPOT
ACCEPT?         <Y>

NEW NUMBER?     <1528>
THAT RN IS NOT NOW IN USE
ACCEPT?         <Y>

OLD NUMBER?     <823>
THAT IS THE RN FOR
JON K. FREEPOT
ACCEPT?         <N>

OLD NUMBER?     <824>
THAT IS THE RN FOR
JUNE FREEPOT KENILCAMP
ACCEPT?         <Y>

NEW NUMBER?     <1582>
THAT IS THE RN FOR
HARVEY WIGWORM
ACCEPT?         <Y>

OLD NUMBER?     <'return'>
```

In this example if you don't reassign Harvey Wigworm, his old record will be wiped out when June Kenilcamp's overwrites it.

It is obviously much faster to omit the verification, but you should exercise great care lest you inadvertently wipe something (somebody!) out.

13.3.2 Moving Blocks of Records

When you select <B> from the first menu in RENUMBER, you are asked for the old range with

```
OLD RANGE OF RN'S (FIRST#,LAST#)? <20-30>
```

Both the first and last numbers may be the same if you wish. You may separate the numbers with a dash, a comma, or almost any character

except a number. If you forget to type the second number, you will be asked for it.

Next you are asked for the first number in the new range with

FIRST NEW RN? <320>

the program computes the last number in the new range and asks for verification with

MOVE 20-30 TO BE 320-330.
IS THAT O.K. (Y/N)?

Any answer except <N> is assumed to accept it.

You continue to be asked for ranges of RN's to move until you answer the "old range" question by pressing 'return'. When you do that, you are shown the entire list of ranges for a final verification before the moving begins.

Note that it is O.K. to swap or cycle ranges of numbers. RENUMBER knows how to handle it and in what order. For example, if you ask to move 20-30 to be 320-330 and 320-330 to be 20-30, those records would be swapppd, with no data lost. Such swaps must all be done in the same request however.

13.3.3 Renumbering a Whole Diskette

The capability to renumber a whole diskette is provided to allow you to merge formerly independent diskette sets. You will be asked to define the new diskette number either by directly supplying the number or by providing one RN that will be on it, analogous to what is done to define a diskette number in EDIT. The new diskette number should not be one you currently have in your set. Since RENUMBER has no way of knowing how many diskettes you have in your set, there is no way to verify your entry. Please be careful.

After you've specified who's to be renumbered, you will be asked

OK TO START?

as one last safeguard. When you answer <Y>, RENUMBER will direct you in what diskettes to insert and where. Just follow the instructions.

13.3.4 Correcting References

You will recall that most person fields have a record number stored in them. When you move a record, the record numbers change and the information in them gets moved to a different location on the diskette or perhaps to a different diskette. However, at that point the references to the moved records haven't been changed yet. For example, if you moved record number 27 to be record 85, you will have a record somewhere still saying that RN=27 is the mother, when it should be RN=85.

When the records you requested have been moved, or the diskette number has been changed, RENUMBER will ask if you want to correct the RN's. What it wants to know is whether to go through the records to look for the references to the moved records in order to correct them.

It asks, via a menu, whether you want to have it check through a range of records or to have it go through every record on the diskette of your choice. In either case you must tell it what range or what diskette. It does no harm to have RENUMBER attempt reference correction on records that were not affected by your moves. In other words, if you are not certain of the number range to choose, make a generous guess at it. The safest course is to have it check every record on every data diskette, but that may take quite a while. After it finishes with one number range or diskette, it returns to the reference correction menu for your selection of another range or diskette.

When RENUMBER finishes with the standard diskettes, it will ask if you have any text diskettes. If you answer YES, it will ask for the diskettes one by one. After each is inserted, it will attempt to change the standard file names for the altered RN's. If you aren't using standard file names, you should say you don't have any text diskettes. Please see section 7 or section 11 for a discussion of standard text file names.

13.4 The ADDRESSES Utility

ADDRESSES is used to display or print an address list for living people whose addresses are stored on the standard data diskettes. The people used must have an "L" for "Living" stored in their Death Date or Living field to be considered, and the entry in the DIED/LIVING AT field must have at least 1 semicolon, indicating a full address is stored there. Refer to section 4.3.5.2 if this doesn't make sense to you.

The printed addresses will appear in a single column; there isn't any way to make several columns at a time other than by cutting and pasting the printouts. You may print a list on standard printer paper or on address labels. If you print on standard paper, you have the capability

to use headers (standard and custom) and control the page formatting (margins, lines per page). When you print on labels, you will need to tell ADDRESSES how big your labels are, since they are available in various sizes.

You can use the usual name access methods described in section 4.3.1 to choose the set of people; in addition you may ask that a whole diskette be examined.

After you specify the names to use, the program proceeds to examine each record and print the name and address for those that are valid. ADDRESSES will tell you which diskettes to insert and where.

ADDRESSES has a menu of parameters, which is used in much the same way as in the other FAMILY ROOTS programs. There are 14 parameters on the menu:

SHOW ID AFTER NAMES
TOP-OF-FORM AFTER PRINTS
SIZE OF LEFT MARGIN
SHOW LAST NAME FIRST
SHOW MARRIED NAME
TAB BEFORE HEADER
USE CUSTOM HEADER
LINES PER PAGE
LINES BETWEEN LABEL TOPS
OMIT TELEPHONE NUMBER
FIRST SHEET NUMBER
SUBSTITUTE SPECIAL ID
PRINT SIZE
DATE

The parameters are all common to other programs except for the two discussed below. Please see section 5.4 for details on the others. The two parameters unique to ADDRESSES are:

a) LINES BETWEEN LABEL TOPS. This has a default of 0. When it is zero, it is assumed you are printing on standard computer paper rather than on address labels. When it is larger than zero, it assumes you are printing directly onto gummed labels. In this case, the parameters relating to headers, top-of-form, sheet numbers, and lines per page will have no effect. The value of this parameter is the number of lines from the top of one label to the top of the next label. It is not the number of lines from the bottom of one label to the top of the next. If you are using the usual line spacing of 6 lines per inch, you can determing the appropriate setting by measuring your labels.

b) OMIT TELEPHONE NUMBER. When you have a telephone number included in an address, it is assumed to be the last part. If you want the phone numbers included in your address list (even on labels), you would set this parameter to NO, which is its usual value. If you want to have the addresses without the phone numbers, you would set this to YES. When set to YES, it will not print the last part of any address that has no letters in it, i.e. the letters A through Z, or a through z. For example, (617)641-2930 would be omitted, but (617)MI1-2930 would not be omitted. The parts of the address are identified by the presence of semi-colons.

13.5 The READER Utility

READER is used to put a previously generated list of names into memory for use by another of the FAMILY ROOTS programs. The list to be read will have been generated by either the LISTS program or the SEARCH program on a scratch diskette; please refer to sections 9.4.4 and 10.3 respectively on how to save lists to diskette. After READER has been executed successfully, the

LIST IN MEMORY

option on the Access Menu for EDIT, FREE-FORMS, STRUCTURES, PERSONS, GROUPS, WORDS, SEARCH, and ADDRESSES will appear; please refer to the discussion near the end of section 4.3.1 if you don't understand what this means. If you want to put a list into memory for use by the LISTS program, see section 9.4.3 for more information.

When you run READER, it first provides you some reminders about the uses of a List in Memory and then asks for the scratch diskette to be read. While the list is being read, the screen message will show what type of list it is--alphabetic or numeric. (The message may only flash briefly if the list is very short.) When the list has been read, the screen then shows how many RN's are stored, and the exit menu will then appear after a short time. You can "hurry up" the appearance of the exit menu by pressing any key.

Not every list of names will fit in memory. The number of names that can be accommodated is determined by the MAXIMUM NUMBER LIST SIZE parameter, which can be set using MANAGER and is normally 99. If your list won't fit, READER will tell you so. In this case READER gives you two options:

A) Put as many names as possible into memory starting from the beginning of the list, or
B) Skip some number of names and then put up to the maximum into memory.

If you choose the second option, you will also need to tell READER how many names to skip. Actually, there is a third option not provided by READER: go to MANAGER to make the MAXIMUM NUMBER LIST SIZE bigger; refer to section 12.3.2 for more information on that.

13.6 The EMPTIES Utility.

EMPTIES is a program for making a list of unused record numbers (RN's) on your screen or the printer. You start it by selecting EMPTIES from the menu of programs after booting or after having run another program. You would use EMPTIES to see how much of your diskette space is used or to see how it is organized. This helps you find places to put additional people.

When EMPTIES starts there will be a request to insert your diskettes at the start, followed by a menu:

A) DISPLAY UNUSED RN'S
B) PRINT UNUSED RN'S
C) CHANGE PROGRAM PARAMETERS
D) CHECK DISKETTES
E) EXIT PROGRAM

After making your choice of A or B, you will be asked for a number range. You will typically want to make a list for an entire diskette or set of diskettes. If you press **<'return'>** in answer to the START NUMBER and END NUMBER questions, you will get a list for all the contiguous RN's available on diskettes in the drives.

All records within the specified range will be examined, and a list of unused record numbers in the range will be made. An example of the printed list is shown in Figure 27.

There are eight parameters available in EMPTIES for affecting formatting and headers:

TOP-OF-FORM AFTER PRINTS
SIZE OF LEFT MARGIN
TAB BEFORE HEADER
USE CUSTOM HEADER
USE PREVIOUS HEADER
LINES PER PAGE
FIRST SHEET NUMBER
PRINT SIZE
NUMBER OF COLUMNS

All except the last are identical to the ones described for many other programs. Please see section 5.4 for more details.

UNUSED RN'S BETWEEN 426 AND 850 ARE AS FOLLOWS:

426	434	435	436	437	438	439	440	441	442	444	445	447
448	452	457	464	470	473	474	561	669	701	702	703	704
705	706	707	708	709	710	711	712	713	714	715	716	717
718	719	720	721	722	723	724	725	726	727	728	729	730
731	732	733	734	735	736	737	738	739	740	741	742	743
744	745	746	747	748	749	750	751	752	753	754	755	756
757	758	759	760	761	762	763	764	765	766	767	768	769
770	771	772	773	774	775	776	777	778	779	780	781	782
783	784	785	786	787	788	789	790	791	792	793	794	795
796	797	798	799	800	801	802	803	804	805	806	807	808
809	810	811	812	813	814	815	816	817	818	819	820	821
822	823	824	825	826	827	828	829	830	831	832	833	834
835	836	837	838	839	840	841	842	843	844	845	846	847
848	849	850										

LIST OF UNUSED RECORDS

FIGURE 27

The NUMBER OF COLUMNS parameter determines how many columns of numbers will appear (not how wide the page is, in columns). When it is set to 0, EMPTIES will compute the number to fit as many as possible in the available space. You might want to set this to 1 if you wanted to write something (a name?) after each printed number.

13.7 The CHANGER Utility:

CHANGER is used to expand the space available for each person on your data files after you have already stored information. It does not actually expand the space in your present files, but rather, moves your data to a new set of files. This section describes when and how to use CHANGER. (Note: CHANGER is sold separately.)

CHANGER comes on its own disk. This is a program diskette just like the other ones. You can get into CHANGER by booting the disk and selecting it on the menu of programs, or by inserting the disk with CHANGER in place of a program disk already in the drive an selecting the last item, PROGRAMS. You should NOT run CHANGER yet, however, until you have done your "homework", as described below.

Before running CHANGER, you need to modify the record formatting parameters using MANAGER, and then use CREATE to generate a new set of empty data diskettes that has the larger space set up on them. Let's look into that in more detail.

When you first started using FAMILY ROOTS, you made some choices about the space you would allow for names and for each person. The pertinent parameters were discussed in section 3.2.2.1. There are five such parameters: 1) the maximum number of characters per person (item 16 in the Configuration file); 2) the amount of space allowed in one set of files (item 15); 3) the average length of a name (item 14).

These parameters are accessed in the MANAGER program by selecting <B> from the main menu and <E> from the System Controls. Under normal circumstances you can change anything in the Configuration file without affecting your data, except for these three parameters. Ignore the warning from the MANAGER when you intend to use CHANGER.

This version of CHANGER has one restriction on its use, namely, you must have two floppy drives. If you have a one drive system, we will use CHANGER for you on one of our computers here at Quinsept, for a fee; please contact us for current prices and instructions if you need this service.

The first parameter, the maximum number of characters per person, must account for all information you want to save about a person. This maximum is the same for everyone, which means you need to make it large

enough to accommodate the person with the most information. The value should not include the characters in the person's name, since this is stored elsewhere. Also, references to other people (like father and mother) are generally stored only as the record number, not the full name. You need to plan for 1 character of "overhead" (meaning it's always there, whether you use it or not) for each field; the overhead starts at 20 and gets bigger by 4 for each marriage, by 1 for each child, and by 1 for each note you use (not by the maximum).

You might want to increase the value if you have been getting messages from EDIT occasionally about a record being too long. Frequent causes of this that we have seen are entry of a large number of children, entry of many notes, or use of all of the fields you can define for yourself.

The number of sectors on one diskette might need to be increased if you are starting to use a different type of disk drive. If your disk size is to be found only in characters, convert it to sectors by dividing it by 256.

The average length of a name is just that, an average. Some names will be shorter and others longer. Since you have now stored a number of names, you will have more experience as to what a reasonable average might be.

You may want to increase the space for your names if you have occasionally gotten a message from the EDIT program about 'not enough space to save changed names'. If you make a list of names using the LISTS program, count characters for a sample of the names and take the average, that will get you a good indication of what you might need. Each name also has 4 overhead characters in it--3 separators and 1 terminator--which should be included in the average, i.e., add 4 to any average you may compute.

Having set the above parameters, you now need to return to the MANAGER main menu and save the Configuration file. You do that by selecting **<D>** on the menu. Be sure to save the file to ALL PROGRAM disks, including the copies of the Main, Auxiliary, and Changer disk.

The next step is to make one or more new data diskettes using the CREATE program. The data from your old disks will be moved onto these by CHANGER. It's difficult to say how many you will need, because it depends on how you changed your parameters. In general you will probably need 1 1/2 to 2 times as many new sets of data files as you have old sets of data files.

Your "homework" is done. Now you're ready to use CHANGER.

Get into CHANGER as described above, and have all of your old and all of your new data disks handy. Be sure to keep them well separated, because they can easily get mixed up. It would also be wise to have backups of your old data diskettes, in case you accidentally wipe one of them out by sticking it in a drive where it doesn't belong. We suggest putting a write protect tab on each of the old data diskettes as an extra measure of protection.

CHANGER first tells you a bit about what it's going to do and what you will need; it is a brief summary of the verbiage in the above paragraphs. You are given a chance to abort at this point in case you didn't complete your homework.

CHANGER will ask for your old data diskettes to be placed into drive 1, one at a time. Since it doesn't know how many you have, and furthermore, since you can have gaps in your diskette numbers, it can only work with one at a time. The information in the one old diskette generally will fill up at least one new one and spill over to some extent onto a second new one. That is a generalization, however, and it depends both on the diskette number and the parameters you chose.

Let's suppose your parameter selections did indeed reduce the number of records per diskette. Then the data on old diskette number 1 would be distributed to new disks 1 and 2 (and maybe even to 3, but let's ignore that). Data on old disk 2 would have to start somewhere in the middle of new diskette 2, probably fill up new diskette 3, and spill over to new diskette 4. CHANGER would tell you to mark your new disks as 1 and 2 after filling up new 1 and part of new 2. But notice now that when you start moving information off of old diskette 2, you already have a new disk number 2, and you should use that in preference to an empty new one when CHANGER asks for new disk 2.

After you insert your old data diskette into drive 1, CHANGER tells you which new disks it needs, and gives you another chance to abort, in case you don't have enough new disks. Finally, CHANGER tells you which new disk to place in a drive and proceeds with its work.

It will take a while to complete the move. The screen shows what is happening at all times. First the names are moved, and then the associated family information is moved. CHANGER will tell you when to insert another new disk, and will say which one it needs.

After it is finished moving all the information off the old disk, you will be asked if you have any more old disks to be changed. When you answer <Y>, the cycle repeats again; it tells you to place the old disk in drive 1, how many new disks and which ones it will need, etc. If you answer with anything but <Y>, you will see the familiar Exit menu, and can proceed to another program or quit.

Please preserve your old data disks for a month or two, until you are satisfied that the transfer has been done correctly. It would also be wise to make backups of your new data disks immediately after finishing with CHANGER.

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14. DEALING WITH SOME COMMON PROBLEMS

Many of the problems you might encounter and how to deal with them have been mentioned in previous sections. This section pulls those together in one place for ease of reference and adds a few you may not have heard of before.

Some of this represents our experience and feedback from you, our customers. We appreciate hearing from you, especially when it helps us prevent the same problem from occurring with our other customers. Please let us know of any problems you think should be added here.

Here they are:

a) BASIC error messages. Various kinds of errors can cause you to be dumped into BASIC with a cryptic error message. If you need to get back into the program to preserve something you were doing, GOTO 20000 will get you back to the main menu in most cases. If that didn't work, You will have to begin again from the START program.

   As for the error messages you might get, some we should be told about. SYNTAX ERROR is definitely our problem and needs fixing, although we certainly hope there are none left. OUT OF MEMORY error doesn't necessarily mean you ran out of memory--it is usually caused by the internal pointers getting messed up somehow. DISK FULL is your problem--you probably have something extraneous on the diskette which must be removed. I/O ERROR is a bad diskette sometimes, but not always. The best way to guard against it is to make frequent backups. If you get this error, try rotating the diskette mylar within its shield until the alignment hole is visible (do this by hand), then try reading the diskette again. This has often fixed the problem for us.

   Also see item n.

b) Diskettes won't read. If your disk drives won't read our program diskettes, your drives may need to have their speed adjusted. It is a simple operation which any computer dealer should be able to do for you. There are also programs available that allow you to do this for yourself. Be careful about voiding warranties, however. If it turns out we've sold you a bad diskette, we'll replace it, free-of-charge of course.

c) Programs hang. If you boot one of our programs and it seems to hang up, you probably don't have your equipment configuration set correctly. To solve this problem, run MANAGER again and review all hardware parameters. Please see section 3.1 and subsections for more details on this.

Another cause for the programs hanging is when the program diskette has a write-protect tab over its notch. This situation causes a hangup because START, the first program, tries to write the date you entered on the program diskette for safe-keeping. It can't do that when the diskette is protected.

d) Printer won't work. If your printer won't print, review all of the controls you specified in MANAGER. If after checking everything out, it still doesn't work, please contact us. With the wide variety of printers on the market today, it is difficult for us to anticipate all possible ways that a printer might be controlled.

e) Missing CONFIGURATION. If you get a message that your CONFIGURATION file is missing, it is. To get it back, get into MANAGER directly (type LOAD "MANAGER",8 followed by RUN) and reset all the parameters to their correct values. To be sure that you have the right diskette formatting parameters, you may want to run the WHAT utility to see the values you used before.

f) Data scrambled. Sometimes you may see totally unexpected values in places, such as a name where the date should appear. The computer's internal pointers are partially messed up. (This can be caused by sparks or improper grounding). The cure is to restart.

g) Name storage overflow. Names are stored in sets (nominally 15 per set) on the diskettes. While each name can have a variable length, the overall limit for the set can't be exceeded. If you use a number of long names in succession, you may hit the limit and EDIT will refuse to store the names. You can try using a different RN for some of the names, or you can shorten one or more of the names. See also sections 4.2.1. and 4.7.

h) Data overflow. When entering information in a person's record, EDIT shows you how much space you have used out of the total available. If you exceed the limit, EDIT won't save the record. You can correct this by shortening some of the information in the record. Try abbreviating state or country names, for example.

i) Scrambling diskettes. If you have separate data diskette sets that use the same parameters, it is possible to insert a diskette from one set while working with the other. This may cause writing the wrong data on the diskette if you are using EDIT. The best way to fix this is to prevent it and to make frequent backups. To fix it otherwise you will have to review ALL the records on the diskette and correct those in error.

If you swap diskettes in a drive without being told or without selecting "check diskettes" from the menu, this problem can occur as well.

j) Won't accept diskette. Every program checks the data diskettes used to be sure the right formatting parameters are present. If they're not, the program gives you a message and dies. The problem is a mismatch between the data diskette and the CONFIGURATION file. Use the WHAT utility to find the correct parameters and change the CONFIGURATION file.

k) End of Data Error. This message from BASIC can have various causes. One likely one is that you don't have the same CONFIGURATION file on both the main and Auxiliary Program diskettes. To correct this, use the MANAGER program to save the file on all program diskettes as described in section 3.2.2. Since this error can have other causes, this may not repair the problem.

l) Dates not printing right. There are two main causes of this. Either you didn't enter the dates in the accepted formats described in section 4.3.4, or you changed the date order control parameter described in section 3.2.2 after having entered some dates. Some problems with correct entry format have been no use of spaces (e.g. 23Aug1972 with no spaces will not be recognized) and use of dashes with the wrong format (e.g. 23-Aug-1972 won't be recognized but 23-11-1972 will be). If your problem was caused by changing the control parameter, you will have to reenter the dates that aren't being printed correctly.

   Another problem can occur when you choose not to use standard dates. If you enter dates like 3Aug1972 (no spaces), that won't be printed correctly when the USE MONTH NAMES parameter is on, since it is the same length as a standard date. Make sure such dates are 9 digits long, e.g., 03Aug1972.

m) Illegal Quantity (BASIC) error. This can have various causes. One possibility is a program error which we should be notified about. Another case involves correct use of the CONFIGURATION file, namely, having the correct copy on all Program diskettes. One situation which occurred was that a customer had increased the maximum children to 17 and made some entries. He subsequently forgot about that, later changed the maximum children back to 15. When he tried to retrieve the information for that person with 17 children, this error occurred. The fix is simple--change the maximum and everything is again OK.

n) Data diskette not recognized. This can happen if the file that has the diskette identity (named CONTROLS) is overwritten, destroyed, or erased somehow. One way this can happen is if you succeed, despite program warnings, in putting a CONFIGURATION file onto a DATA diskette. There are other possible ways unrelated to the

program. As long as the FAMILY and NAMELIST files are still present, you can recover from this error as follows:

Make an empty data diskette using CREATE. Next copy the CONTROLS file from the empty one onto the problem diskette. Finally, get into the EDIT program via the usual procedures, and tell EDIT which diskette this is, when it asks. After doing this you should check the information for several people to be sure the files are OK. If you didn't make a backup, do so! Shame on you!

o) Printer goes haywire. You may have a control character in the data you entered which has been interpreted by your printer as a control for itself, not exactly a desired result. You need to abort your operation using CTRL Z and then turn your printer off and on again to clear the garbage out of it.

p) Screen full of garbage. This odd occurrence would happen after you select a program from the programs menu and it starts to load; the screen then fills up and the computer dies. The cause is probably one of the sizes being set too large to fit in your memory. You need to power off, power on after counting to 10, get into MANAGER directly (LOAD "MANAGER",8 followed by RUN). You can't reliably get into MANAGER any other way with this problem. Once you are into MANAGER, check the maxima and set some smaller if possible. The usual culprit on this one is MAXIMUM NUMBER LIST SIZE; see section 12.3.2 for more information about this parameter.

q) All names show as NO RN. You are not entering numbered names properly if you have this problem. Please review section 4.3.6 again. The most common error of this type is entering both the name and the RN. For example, if the name Dorfy Ditmyer has been associated with RN 627 (as described in section 4.2 and subsections), then the correct entry in a person field would be like

5) FATHER? **<627>**

(don't type the "<>" brackets) but the following would be incorrect

5) FATHER? **<627 DORFY DITMYER>**

or

5) FATHER? **<DORFY DITMYER 627>**

or

5) FATHER? **<DORFY DITMYER (RN=627)>**

r) Date missing. If you don't have a date on your program parameters menu, you left the date parameter empty in the CONFIGURATION file. Run MANAGER and enter anything for that date. You can later modify the date each time you run.

s) LISTS doesn't recognize data diskette. When you use a scratch diskette with LISTS, it marks the drive as not having a standard data disk in it. If you use your standard data diskette to store or retrieve a scratch list, LISTS won't know it's there any more. To cure this, return to the LISTS Main Menu and select CHECK DISKETTES.

t) Computer locked up. This means that your computer does not respond to any input, or that you cannot stop its current action. One possible cause is that you have two different versions of a program mixed, i.e. the Main Programs disk is of a different version than the Auxiliary Programs disk. Another possible reason might be that you didn't start sequence as described in section 3-1.

u) Message with error number. In general, all errors are trapped. That means that when an error occurred, a message with the error number and the line number in which it occurred will be displayed. Pressing any key will reboot the program, i.e. you will be put back to the first menu of the program you were using. Please see Appendix C for a list of error codes.

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15. WRAP-UP

Thanks for taking the time and effort to read this user's guide. We hope it has been worth it. We'd like to reiterate that your ideas and suggestions for improvements and new products are welcome. We are constantly seeking to enhance our product and want to know your desires. Some future possibilities that come to mind are:

a) A program to compute statistics on your family, e.g. average number of marriages, average number of children, locality distributions, etc. Is this essential, or just interesting?

b) A program to check the consistency of your data. This hasn't been essential so far because of the complementing features in EDIT. Such a program could check whether dates for a person are in the proper order and plausible, as well as comparing dates with parents' and childrens' records. Other possibilities?

c) A program to output the relationship of any two people you specify. We have seen some nice graphic presentations of this type. It's nice, but do you need it?

d) A utility to make check lists for carrying with you on your trip to the library, archives, town hall, etc. If you need something like this, an example of what you are now using would be helpful.

e) A program to make reports, with the ability to include as little or as much information as you wish, sorted according to the specified fields. Very useful for comparisons and for checking possible holes, but very time consuming to generate--do you need it?

That's about it!

Good hunting with your genealogies!

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APPENDIX A

SPECIAL CHARACTERS USED BY FAMILY ROOTS

The following characters have a special meaning under certain circumstances when used in FAMILY ROOTS from the keyboard. Please examine the referenced section if you need more information.

Character	Section	Use
CTRL-E	4.2.2 4.3.2 8.4	Erasing an entry.
CTRL-O	4.3.5.2	Suppress zip code printing.
CTRL-Z	3.5 4.7 etc.	Abort procedure and return to main menu.
^	12.3.6 4.3.3 4.3.4 & others	Footnote referencing
K	4.4	Asl fpr Change Function Keys menu
P	4.2.1 & others	Ask for Change Parameters menu
S	4.3.2	Step through fields
D	4.3.2 5.2 & others	Display or re-display
C	5.2, 6.2 8.2	Continue without asking again
M	4.3.1	Show list in memory when present

APPENDIX B

QUINSEPT STANDARD POLICIES

QUINSEPT has the following standard policies which you may like to know about:

a) We offer a 60 day unqualified guarantee of satisfaction on all our software. The 60 days begins on the date of purchase. If for any reason you decide not to keep Family Roots, you may return it to where you bought it for full refund - that means to the store, mail order house, or us. Note that ALL copied materials, including backup diskettes, must be returned with the package.

b) We offer our customers a commission on sales generated via referrals. The commission is 10% of the net price we receive. To collect the fee, the new customer must mention the referral at some point during the sale, and the referring customer must claim the payment or credit. We will be happy to accumulate credits against future purchases if you wish.

c) Updates of our software are made 2 to 4 times per year. The updates include fixes to reported bugs and incorporate additional features. We announce updates that add major features; those with only minor additions or minor corrections of errors aren't announced. Registered users may get the current version at any time by sending for a set of "replacement" diskettes, i.e. they need not wait for an announcement of an update. An extra fee may occasionally be charged for extraordinarily large updates. A user need not purchase an update to qualify for purchase of succeeding ones. The price of a set of replacement diskettes at the time this is written is $20 per set.

d) We have local representatives in many metropolitan areas. These people may be contacted for support as needed. Please be aware that some of this service may incur a charge, to be negotiated between you and the representative.

e) Although we have no direct association with the QUINSEPT USER GROUP, we do support it in various ways. We supply the group with the names and addresses of all new registered users on a periodic basis. We also submit news items and product information of general interest for inclusion in the newsletter; actual inclusion is at the editor's option. The address of the Quinsept User Group as of June 1987 is c/o Bob Mitchell, 102 Broadfield Lane, Spotsylvania, VA 22553-9101.

f) All of the above policies are subject to change without notice. In any case where a time period is involved, as in the first above, any change will become effective after expiration of the period relative to your date of purchase.

APPENDIX C

ERROR CODE MEANINGS

1. TOO MANY FILES
2. FILE OPEN
3. FILE NOT OPEN
4. FILE NOT FOUND
5. DEVICE NOT PRESENT
6. NOT INPUT FILE
7. NOT OUTPUT FILE
8. MISSING FILENAME
9. ILLEGAL DEVICE NUMBER
10. NEXT WITHOUT FOR
11. SYNTAX
12. RETURN WITHOUT GOSUB
13. OUT OF DATA
14. ILLEGAL QUANTITY
15. OVERFLOW
16. OUT OF MEMORY
17. UNDEF'D STATEMENT
18. BAD SUBSCRIPT
19. REDIM'D ARRAY
20. DIVISION BY ZERO
21. ILLEGAL DIRECT
22. TYPE MISMATCH
23. STRING TOO LONG
24. FILE DATA
25. FORMULA TOO COMPLEX
26. CAN'T CONTINUE
27. UNDEF'D FUNCTION
28. VERIFY
29. LOAD
52. BLOCK HEADER NOT FOUND ON DISK
53. SYNC CHARACTER NOT FOUND
54. DATA BLOCK NOT PRESENT
55. CHECKSUM ERROR IN DATA
56. BYTE DECODING ERROR
57. WRITE-VERIFY ERROR
58. ATTEMPT TO WRITE WITH WRITE PROTECT ON
59. CHECKSUM ERROR IN HEADER
60. DATA EXTENDS INTO NEXT BLOCK
61. DISK ID MISMATCH
62. GENERAL SYNTAX ERROR
63. INVALID COMMAND
64. LONG LINE
65. INVALID FILENAME
66. NO FILE GIVEN

71. COMMAND FILE NOT FOUND
82. RECORD NOT PRESENT
83. OVERFLOW IN RECORD
84. FILE TOO LARGE
92. FILE OPEN TO WRITE
93. FILE NOT OPEN
94. FILE NOT FOUND
95. FILE EXISTS
96. FILE TYPE MISMATCH
97. NO BLOCK
98. ILLEGAL TRACK OR SECTOR
99. ILLEGAL SYSTEM TRACK OR SECTOR
102. NO CHANNELS AVAILABLE
103. DIRECTORY ERRPR
104. DISK FULL OR DIRECTORY FULL
105. POWER UP MESSAGE, OR WRITE ATTEMPT WITH DOS MISMATCH
110. INVALID ERROR MESSAGE RECEIVED FOR THE DRIVE
113. INVALID RESERVATION OF SPACE TRIED
114. OUT OF MEMORY ON DISK
115. ARRAY NOT FOUND
116. MISMATCH IN DIMENSIONS OF ARRAYS
117. RECORD NOT AVAILABLE
119. RECORD TOO LONG
120. RECORD NOT AVAILABLE
121. VARIABLES MISSING IN THE RECORD
122. VARIABLE LENGTH OVER 255 CHARACTERS
125. COUNT FIELD HAS MORE THAN 3 DIGITS
126. COUNT FIELD IS GREATER THAN 255.
127. NAMELIST PAGE INDEX TOO BIG.

APPENDIX D

BACKUP AND RETRIEVAL PROCEDURES

This Appendix covers suggested methods of backing up data diskettes and retrieving information for selected records from a backup.

D.1 Backup Procedures.

Making a backup is the process of copying an entire diskette as described in section 3.1. More considerations than just making a copy are important when you want to have good protection of the data on your diskettes.

You copy a diskette in order to protect yourself from loss of the data you have spent hours and hours entering. If the procedures you use for making copies don't provide the desired protection, you are defeating the purpose of making backups.

Floppy diskettes have a limited (albeit long) lifetime and are subject to damage and wear. Errors can develop on a diskette through wear, faulty manufacture, dirty environment, or mishandling. Whenever a diskette develops an error and you make a copy of it, the copy will almost always show the same error. If you always use the same target diskette in making a backup, you will only have a small chance of having a good backup after an error develops on the original.

You provide yourself the best possible protection by always using a new target diskette for every backup. With that method you would never be copying over something that was previously there, and you would always have some diskette to return to in case of errors. WHO CAN AFFORD THAT? Very few of us. We need to look at alternatives.

Something approaching the ideal can be achieved by using many sets of backups in a rotation scheme. For example, suppose you have 3 backups, called A, B, and C. The first time you backup you would use A, the next time B, the third time C, and then A again. This gives you some time to discover the error before you start the cycle over again. The more sets you use, the better protection you will get. Obviously the more sets you use, the more expensive it is too. While one diskette may cost about $1 or less at today's prices, many Family Roots users have from 5 to 25 data diskettes; that can run into many dollars if you use the program very much.

More protection can be gained by using the rotation scheme in combination with an archival copy. In this case, you would retire one diskette in the rotation on a periodic basis, say once per month or once every 3 months depending on how much you are changing your data. The

retired diskette is put away in a safe place, never to be copied on again. A variation on that is to keep the archived copies for 1 year, and then put them back into service.

It's difficult to say how often you should backup. We all get lazy, since it is somewhat of a nuisance to make backups. You need to develop your own guideline. Decide how many hours of work you could afford to lose and therefore do again. After that many hours of data entry, you should make a backup.

D.2 Retriving Records From Backups.

If you have an error and need to recover the lost or bad information, you will need to know at least two facts: a) whether you have a good backup; and b) where the error occurred. Depending on your backup scheme, you may have succeeded in destroying the relevant data on your backup(s) as well as your original. You should first try the same operation that resulted in the error using the backup to see if it is any good. Before you do that, you should retry the operation with the original diskette to see if the error was temporary or permanent. We'll assume you have a good backup in the rest of this description.

The Family Roots standard data is stored in two files, one for the names and the other for everything else. In order to retrieve data from the backup and restore it onto the original, you need to know: a) what diskette the error is on; b) what record number or numbers are affected; and c) does it affect only the names. Some errors falsely appear to affect more than the names. One clue as to whether it is the names or other information is by how many records are affected. If a clustered group of names seems to be affected, it is probably the name file. If there is only one or a scattered set of records, it is undoubtedly the other file.

Retrieving Names. To correct an error in the name file by retrieving the data from a good backup, please use the following steps:

1) Get into the EDIT program with the backup in one of your drives.

2) Select <B> for "edit names".

3) Select <B> to "change a name".

4) Give it the problem record number when it asks.

5) It will show you the name for that record on the screen and ask if that's the one to change. Answer <Y>.

6) It will ask you to change any of the four parts of the name. Press <'return'> four times.

7) At this point, two conditions are established which will cause EDIT to save the names in memory onto the data diskette. Remove the backup and place the original with the problem IN THE SAME DRIVE.

8) Select <D> from the menu to save to the diskette.

You would only need to follow that procedure for one name out of every set that is stored together. If you have a printout of your Configuration file, Index 36 will tell you how many names are stored together. For example, if your system has 25 names per group and you have a problem with record numbers 86 through 100, you would only need to follow the procedure for one record in the range 76 through 100.

Retrieving Other Information. To correct an error in the family infomation by retrieving from a good backup, please use the following steps:

1) Get into the EDIT program. Have the good backup in one of your drives.

2) Select <A> to edit records.

3) Select <B> to supply a number list.

4) Enter your record number, and end the list with a 'return'.

5) When EDIT shows the record on the screen and asks if you want to change anything, answer <Y>.

6) The record is in memory at this point and can be saved to diskette. Remove the backup and place the original with the problem IN THE SAME DRIVE.

7) Press <'return'> to save the record.

You will need to repeat the above procedure for each record with an error.

APPENDIX E

INSTALLING A PROGRAM UPDATE

When you have been using Family Roots before and receive a set of updated program diskettes from us, there are a few simple steps you may use to painlessly move to the new program. The problem is to move the CONFIGURATION file from your old version so that the settings will be preserved. This implies that your data will be readable and other settings like your User Fields will be available.

The steps are:

1) Make backups of the new program diskettes and put the originals away in a safe place. The remainder of this uses the copies.

2) Boot your old program diskette that has either MANAGER or CONFIGURE on it (depending on the version). Select that program from the menu. When it starts, select the fourth item to save the CONFIGURATION file. Save the file on all the new diskettes.

3) Boot any one of the new diskettes. The program should recognize that an old CONFIGURATION file is present and automatically go into the file updater program. That program will modify your old file and ask you to again insert each program disk in drive 1 to save it.

4) If step 3 fails or causes an error, press the RUN/STOP and RESTORE keys at the same time. You should get the "ready" prompt from BASIC. Then insert the Auxiliary Programs disk and type

```
LOAD"MANAGER",8
RUN
```

5) In any update that has significant additions (like from version 1.7 to version 3.0), you should review all parameter settings via the menus in MANAGER to be sure they are as you want them. In updating to version 3.0 for the first time, please set your printer again. The printer control method in version 3.0 has been changed from what was used before. After any changes, be sure to save the CONFIGURATION file on all program diskettes.

APPENDIX F

GLOSSARY

Ahnentafel - A compressed chart (see 6.3.2).
Complementing - The process that allows you to enter redundant information exactly once (see 4.5).
CTRL - A special key on the keyboard, sometimes marked CONTROL (see 3.4).
Field - A named unit of information in a record, e.g. Birth Date (see 3.4).
File - The largest unit of storage on a diskette (see 3.4).
Function Keys - Keys marked F1 through F8 on your keyboard (see 4.4).
Free-Form Chart - Descendants or pedigree chart designed for computer generation (see section 5).
Group Sheet - A form showing husband, wife, and children of that union (see section 8).
ID - Identification (see 3.5).
Individual Sheet - A form showing the information stored for one person (see section 7).
Menu - A list of choices on your screen.
Note Selector - A method of selecting notes for printing (see 4.3.5.6)
Parameter - A method for controlling the operation and results of a program (see 4.6 and many others).
Record - A file is composed of records. One record stores on person's information (see 3.4).
Record Number - A number showing where one person's data is stored (see 3.5).
RN - Record Number.
Scratch Diskette - A formatted diskette used for temporary storage of information (see 9.4.4).
Scroll - The process that adds a new line at the bottom of the screen and advances all the lines up one; the top line disappears (see 4.3.2).
Source Flag - A method of identifying which notes are source citations (see 4.3.5.6)
Standard Chart - A traditional pedigree chart (see 6.3.1).

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ORDER FORM 11/88 Effective 10/88

Quinsept, Inc., P.O. Box 216, Lexington, MA 02173
1-800-637-ROOT (US) or (617)641-2930 (Mass. & foreign)

FAMILY ROOTS version 3, disks and manual (For IBM, Apple, Commodore 64, & Commodore 128)	$225.00	_____
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FAMILY ROOTS data disk labels 5/$1 or 25/$4 Quan.____		_____
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CHANGER (Note: described in FAMILY ROOTS manual)	20.00	_____

Upgrade prices (limit one per registered customer):

FAMILY ROOTS from either FAMILY CHARTS or FAMILY SHEETS (F.C. + F.S. is not F.R.)	112.00	_____
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TRADE current FAMILY ROOTS for same on different machine except Mac (please return original program disks)	75.00	_____
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Second FAMILY ROOTS ver. 3 for registered FAMILY ROOTS customer (limit one per customer)	135.00	_____
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BIG BLUE READER (needs Commodore 1571 or 1581)	44.95	_____
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Transfer of PAF data to FAMILY ROOTS: $40/hour. Maximum for each PAF GEDCOM file:	$25 for 1st, $18.00 others	_____
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Repair of damaged data disk(s): $40/hour. Please specify limit on number of hours. Success is NOT guaranteed.		_____
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Notes: 1) All prices include shipping within the continental U.S. via first class mail or UPS ground; special services are extra. 2) Prices are subject to change without prior notice. 3) Deduct 5% on orders over $250. 4) We have gift certificates.

IMPORTANT:
Please specify, even if you are only ordering a trial disk (these are specific to the machine):

Which computer do you have? _____
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Drives: ___Single sided ___Double sided
___5.25 inch ___3.5 inch ___Hard disk ___8 inch
Commodore: ___1541 ___1571 ___1581 _____Other
Operating System: ___Apple DOS 3.3 ___Apple ProDOS
___MS DOS or PC DOS _____Version Number of MS DOS
___CP/M _____Version Number of CP/M
___TRSDOS _____Version Number of TRSDOS

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